

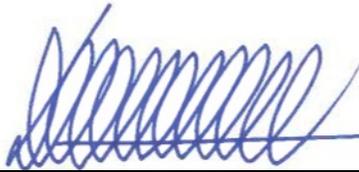
TYPE OF SERVICES	Geotechnical Investigation
PROJECT NAME	Skyport Plaza Hotel/Office Site
LOCATION	1601 Technology Drive San Jose, California
CLIENT	Kenneth Rodrigues & Partners
PROJECT NUMBER	704-1-1
DATE	March 14, 2014



ENVIRONMENTAL

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<b>Project Name</b>	Skyport Plaza Hotel / Office Site
<b>Location</b>	1601 Technology Drive San Jose, California
<b>Client</b>	Kenneth Rodrigues & Partners
<b>Client Address</b>	445 North Whisman Road, Suite 200 Mountain View, California 94043
<b>Project Number</b>	704-1-1
<b>Date</b>	March 14, 2014

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**FIGURE 1: VICINITY MAP**

**FIGURE 2: SITE PLAN**

**FIGURE 3: REGIONAL FAULT MAP**

**APPENDIX A: FIELD INVESTIGATION**

**APPENDIX B: LABORATORY TEST PROGRAM**

**APPENDIX C: LIQUEFACTION ANALYSES CALCULATIONS**

<b>Type of Services</b>	<b>Geotechnical Investigation</b>
<b>Project Name</b>	<b>Skyport Plaza Hotel / Office Site</b>
<b>Location</b>	<b>1601 Technology Drive San Jose, California</b>

## **SECTION 1: INTRODUCTION**

This geotechnical report was prepared for the sole use of Kenneth Rodrigues & Partners for the Skyport Plaza Hotel/Office project in San Jose, California. The location of the site is shown on the Vicinity Map, Figure 1. For our use, we were provided a set of plans titled: "Skyport Plaza Hotel/Office Site, Planned Development Rezoning, San Jose, CA," prepared by Kenneth Rodrigues & Partners, Inc., dated November 25, 2013.

### **1.1 PROJECT DESCRIPTION**

The project will consist of redeveloping the approximate 5¼-acre site for a new office complex. The complex is to include an approximately 350,000 square foot, 10-story office building and a 5-level employee-parking garage with a footprint of approximately 225 feet by 450 feet. The office building will be located adjacent to Technology Drive and the garage will front Highway 87. The structures will likely consist of steel and concrete construction and covered pedestrian arcades and employee recreation areas are to be located between the office building and parking garage.

Preliminary foundation loads provided by the structural engineer indicates interior and exterior dead plus live column loads for the office building will be approximately 1170 and 760 kips, respectively. Interior and exterior dead plus live column loads for the parking garage will reportedly be approximately 680 and 400 kips, respectively. The preliminary grading plans provided indicate finished ground floor elevations for the office and garage structures will be at Elevation 49.5 feet; therefore, we anticipate only minor cuts and fills on the order of 1 to 2 feet will be required to construct the building pads.

### **1.2 SCOPE OF SERVICES**

Our scope of services was presented in our proposal dated January 14, 2014, and consisted of field and laboratory programs to evaluate physical and engineering properties of the subsurface soils, engineering analysis to prepare recommendations for site work and grading, building

foundations, flatwork, retaining walls, and pavements, and preparation of this report. Brief descriptions of our exploration and laboratory programs are presented below.

### **1.3 EXPLORATION PROGRAM**

Field exploration consisted of three borings drilled on February 14 and 18, 2014, with truck-mounted, hollow-stem auger drilling equipment and six Cone Penetration Tests (CPTs) advanced on February 15 and 19, 2014. The borings were drilled to depths of 50 to 70 feet; the CPTs were advanced to depths of 72½ to 99½ feet; practical refusal in dense materials occurred in CPT-2 and CPT-6. Seismic shear wave velocity measurements were collected from CPT-6.

The borings and CPTs were backfilled with cement grout in accordance with local requirements; exploration permits were obtained as required by local jurisdictions.

The approximate locations of our exploratory borings are shown on the Site Plan, Figure 2. Details regarding our field program are included in Appendix A.

### **1.4 LABORATORY TESTING PROGRAM**

In addition to visual classification of samples, the laboratory program focused on obtaining data for foundation design and seismic ground deformation estimates. Testing included moisture contents, dry densities, washed sieve analyses, Plasticity Index tests, consolidation tests, and triaxial compression tests. Details regarding our laboratory program are included in Appendix B.

### **1.5 ENVIRONMENTAL SERVICES**

Environmental services were not requested for this project. If environmental concerns are determined to be present during future evaluations, the project environmental consultant should review our geotechnical recommendations for compatibility with the environmental concerns.

## **SECTION 2: REGIONAL SETTING**

### **2.1 GEOLOGICAL SETTING**

The site is located within the Santa Clara Valley, which is a broad alluvial plane between the Santa Cruz Mountains to the southwest and west, and the Diablo Range to the northeast. The San Andreas Fault system, including the Monte Vista-Shannon Fault, exists within the Santa Cruz Mountains and the Hayward and Calaveras Fault systems exist within the Diablo Range. Alluvial soil thicknesses in the area of the site are greater than 500 feet (Rogers & Williams, 1974).

### **2.2 REGIONAL SEISMICITY**

The San Francisco Bay area is one of the most seismically active areas in the Country. While seismologists cannot predict earthquake events, the U.S. Geological Survey's Working Group on California Earthquake Probabilities 2007 estimates there is a 63 percent chance of at least

one magnitude 6.7 or greater earthquake occurring in the Bay Area region between 2007 and 2036. As seen with damage in San Francisco and Oakland due to the 1989 Loma Prieta earthquake that was centered about 50 miles south of San Francisco, significant damage can occur at considerable distances. Higher levels of shaking and damage would be expected for earthquakes occurring at closer distances.

The faults considered capable of generating significant earthquakes are generally associated with the well-defined areas of crustal movement, which trend northwesterly. The table below presents the State-considered active faults within 25 kilometers of the site.

**Table 1: Approximate Fault Distances**

Fault Name	Distance	
	(miles)	(kilometers)
Hayward (Southeast Extension)	5.4	8.7
Monte Vista-Shannon	8.1	13.1
Hayward (Total Length)	8.2	13.2
Calaveras	8.4	13.5
San Andreas (1906)	12.2	19.6

A regional fault map is presented as Figure 3, illustrating the relative distances of the site to significant fault zones.

## **SECTION 3: SITE CONDITIONS**

### **3.1 SURFACE DESCRIPTION**

The site is relatively flat and consists of an open field covered in grass and small weeds within the center area and existing asphalt concrete (AC) driveways and parking stalls from previous site development within most of the outer areas of the site. Mature trees line most of the eastern, western, and southern perimeters and the open field appears to have been tilled in the past. The site is bounded by Highway 87 to the southwest; Sonora Avenue, residential development, and a city park to the southeast; Technology Drive to the northeast, and a previously developed site to the northwest that has been demolished.

Our borings were located within the open field, therefore, we did not obtain an approximate thickness of the existing AC and underlying aggregate base (AB). However, the existing pavements appear to be in poor condition with alligator cracking and other associated distress.

### **3.2 SUBSURFACE CONDITIONS**

Below the surficial site conditions mentioned above, our exploratory borings encountered 3 to 5½ feet of undocumented fill generally consisting of hard sandy lean clays and medium dense clayey sands. The fill was likely placed during previous site development; however, compaction

records for the fill are not available. Below the undocumented fill, the site is generally underlain by medium stiff to very stiff clays with variable amounts of sand. The clays are interbedded with occasional layers of sand and silt to a depth of 99½ feet, the maximum depth explored.

Moderately to highly expansive, fat clay was generally encountered in our borings starting at depths of approximately 7½ to 12 feet below the surface and extending down to 17 to 27 feet below the surface. As discussed, discontinuous layers of medium dense to dense silty and clayey sand ranging from approximately 2 to 9 foot thick were encountered in our CPTs and in Borings EB-2 and EB-3 below depths of approximately 29 feet.

### **3.2.1 Plasticity/Expansion Potential**

We performed three Plasticity Index (PI) tests on representative samples. Test results were used to evaluate expansion potential of surficial soils, and the plasticity of the fines in potentially liquefiable layers. The result of the surficial PI test within the existing fill indicated a PI of 16, indicating moderate expansion potential to wetting and drying cycles. To aid in our liquefaction evaluation, two PIs were performed at a depth of approximately 29½ and 34½ feet. The tests indicated PIs of 9 and 7, respectively.

### **3.2.2 In-Situ Moisture Contents**

Laboratory testing indicated that the in-situ moisture contents within the upper 10 feet range from approximately the estimated laboratory optimum moisture to 10 percent over the estimated laboratory optimum moisture.

## **3.3 GROUND WATER**

Ground water was encountered in our borings at a depth of approximately 15 feet below the current grade. In addition, a ground water measurement was inferred at a depth of approximately 6½ feet below the current grade based on a pore pressure dissipation test performed at CPT-3. All measurements were taken at the time of drilling and may not represent the stabilized levels that can be higher than the initial levels encountered.

Historic high ground water levels are mapped at a depth of approximately 7 to 8 feet (CGS, 2002), although it is not known if these historic ground water levels are based on original site grades from published USGS topographic data. For our analysis, we assumed a design ground water level of 6½ feet below current site grades.

Fluctuations in ground water levels occur due to many factors including seasonal fluctuation, underground drainage patterns, regional fluctuations, and other factors.

## **SECTION 4: GEOLOGIC HAZARDS**

### **4.1 FAULT RUPTURE**

As discussed above several significant faults are located within 25 kilometers of the site. The site is not located within a State-designated Alquist-Priolo Earthquake Fault Zone or a Santa Clara County Fault Hazard Zone (Santa Clara County, 2002). As shown in Figure 3, no known surface expression of fault traces is thought to cross the site; therefore, fault rupture hazard is not a significant geologic hazard at the site.

### **4.2 ESTIMATED GROUND SHAKING**

Moderate to severe (design-level) earthquakes can cause strong ground shaking, which is the case for most sites within the Bay Area. A peak ground acceleration (PGA) was estimated for analysis using  $PGA_M = F_{PGA} \times PGA_G$  (Equation 11.8-1) as allowed in the 2013 California Building Code. For our liquefaction analysis, we used a PGA of 0.50g.

### **4.3 LIQUEFACTION POTENTIAL**

The site is located within a State-designated Liquefaction Hazard Zone (CGS, San Jose West Quadrangle, 2002) as well as a Santa Clara County Liquefaction Hazard Zone (Santa Clara County, 2002). Our field and laboratory programs addressed this issue by sampling potentially liquefiable layers to depths of at least 50 feet, performing visual classification on sampled materials, evaluating CPT correlations, and performing various tests to further classify the soil properties.

#### **4.3.1 Background**

During strong seismic shaking, cyclically induced stresses can cause increased pore pressures within the soil matrix that can result in liquefaction triggering, soil softening due to shear stress loss, potentially significant ground deformation due to settlement within sandy liquefiable layers as pore pressures dissipate, and/or flow failures in sloping ground or where open faces are present (lateral spreading) (NCEER 1998). Limited field and laboratory data is available regarding ground deformation due to settlement; however, in clean sand layers settlement on the order of 2 to 4 percent of the liquefied layer thickness can occur. Soils most susceptible to liquefaction are loose, non-cohesive soils that are saturated and are bedded with poor drainage, such as sand and silt layers bedded with a cohesive cap.

#### **4.3.2 Analysis**

As discussed in the "Subsurface" section above, sand layers were encountered below the design ground water depth of 6½ feet. Following the procedures in the 2008 monograph, *Soil Liquefaction During Earthquakes* (Idriss and Boulanger, 2008) and in accordance with CDMG Special Publication 117A guidelines (CDMG, 2008) for quantitative analysis, these layers were analyzed for liquefaction triggering and potential post-liquefaction settlement. These methods compare the ratio of the estimated cyclic shaking (Cyclic Stress Ratio - CSR) to the soil's

estimated resistance to cyclic shaking (Cyclic Resistance Ratio - CRR), providing a factor of safety against liquefaction triggering. Factors of safety less than or equal to 1.3 are considered to be potentially liquefiable and capable of post-liquefaction re-consolidation.

The CSR for each layer quantifies the stresses anticipated to be generated due to a design-level seismic event, is based on the peak horizontal acceleration generated at the ground surface discussed in the “Estimated Ground Shaking” section above, and is corrected for overburden and stress reduction factors as discussed in the procedure developed by Seed and Idriss (1971) and updated in the 2008 Idriss and Boulanger monograph.

The soil’s CRR is estimated from the in-situ measurements from CPTs and laboratory testing on samples retrieved from our borings. SPT “N” values obtained from hollow-stem auger borings were not used in our analyses, as the “N” values obtained are unreliable in sands below ground water. The tip pressures are corrected for effective overburden stresses, taking into consideration both the ground water level at the time of exploration and the design ground water level, and stress reduction versus depth factors. The CPT method utilizes the soil behavior type index ( $I_c$ ) to estimate the plasticity of the layers.

The results of our CPT analyses (CPT-1 through CPT-6) are presented on Figures 4A through 4F of this report. Calculations for these CPTs are attached as Appendix C.

### **4.3.3 Summary**

Our analyses indicate that some layers could potentially experience liquefaction triggering that could result in soil softening and post-liquefaction total settlement based on the Yoshimine et al. (2006) method. The estimated liquefaction settlement would be on the order of  $\frac{1}{2}$  to  $\frac{3}{4}$  inch for the 10-story office building (CPT-5 and CPT-6), approximately  $\frac{1}{2}$  inch to  $1\frac{1}{2}$  inches along the western edge of the 5-story parking garage (CPT-1 and CPT-2), and negligible settlement across the remainder of the garage building (CPT-3 and CPT-4).

As discussed in SP 117A, differential movement for level ground sites over deep soil sites will be about one-half to two-thirds of the total settlement. In our opinion, differential settlements between independent foundation elements are anticipated to be on the order of  $\frac{1}{2}$  inch or less for the office building and approximately  $\frac{3}{4}$  inch or less for the western edge of the parking garage. Differential settlement due to liquefaction across the remainder of the parking garage is estimated to be negligible.

### **4.3.4 Ground Rupture Potential**

The methods used to estimate liquefaction settlements assume that there is a sufficient cap of non-liquefiable material to prevent ground rupture or sand boils. For ground rupture to occur, the pore water pressure within the liquefiable soil layer will need to be great enough to break through the overlying non-liquefiable layer, which could cause significant ground deformation and settlement. The work of Youd and Garris (1995) indicates that the greater than 12-foot thick layer of non-liquefiable cap is sufficient to prevent ground rupture; therefore the above total settlement estimates are reasonable.

#### **4.4 LATERAL SPREADING**

Lateral spreading is horizontal/lateral ground movement of relatively flat-lying soil deposits towards a free face such as an excavation, channel, or open body of water; typically lateral spreading is associated with liquefaction of one or more subsurface layers near the bottom of the exposed slope. As failure tends to propagate as block failures, it is difficult to analyze and estimate where the first tension crack will form.

The Guadalupe River channel is located approximately 350 to 380 feet west of the western site boundary on the opposite side of Highway 87. Based on our review of the liquefaction analysis, the relatively discontinuous nature and varying depth of potentially liquefiable layers, and the estimated depth of the river channel, in our opinion, the potential for lateral spreading towards the channel is considered relatively low.

#### **4.5 SEISMIC SETTLEMENT/UNSATURATED SAND SHAKING**

Loose unsaturated sandy soils can settle during strong seismic shaking. As the soils encountered at the site were predominantly stiff to hard clays and medium dense to dense sands above the water table, in our opinion, the potential for significant differential seismic settlement affecting the proposed improvements is low.

#### **4.6 FLOODING**

Based on our internet search of the Federal Emergency Management Agency (FEMA) flood map public database, the site is located within Zone X, an area determined to be outside the 0.2% annual chance floodplain. We recommend the project civil engineer be retained to confirm this information and verify the base flood elevation, if appropriate.

The Association of Bay Area Governments has compiled a database of Dam Failure Inundation Hazard Maps (ABAG, 1995). The generalized hazard maps were prepared by dam owners as required by the State Office of Emergency Services; they are intended for planning purposes only. Based on our review of these maps, the site is located within a dam failure inundation area for Stevens Creek and Lexington Reservoirs.

### **SECTION 5: CONCLUSIONS**

#### **5.1 SUMMARY**

From a geotechnical viewpoint, the project is feasible provided the concerns listed below are addressed in the project design. Descriptions of each concern with brief outlines of our recommendations follow the listed concerns.

- Potential for significant static and seismic settlements
- Presence of undocumented fill
- Shallow ground water

### **5.1.1 Potential for Significant Static and Seismic Settlements**

We evaluated immediate and consolidation settlement due to static building loads based on the anticipated loads provided by the structural engineer and a range of allowable bearing pressures. For the 10-story tower, total static settlement was estimated to range from approximately 2½ to 3 inches for conventional shallow footings. For the parking garage, total static settlement was estimated to range from approximately ¾ to 1¼ inches for conventional shallow footings.

As discussed, our liquefaction analysis indicates that there is a potential for liquefaction of localized sand layers during a significant seismic event. Although the potential for liquefied sands to vent to the ground surface through cracks in the surficial soils is low, our analysis indicates that total liquefaction-induced settlement on the order of ½ to ¾ inch could occur within the 10-story tower. Total liquefaction-induced settlement on the order of less than ¼ to 1½ inch is estimated within the garage structure, which appears to be limited to the western side of the garage (CPT-1 and CPT-2).

As discussed in the “Liquefaction Potential” Section of this report, seismically-induced differential settlements between independent foundation elements are anticipated to be on the order of ½ inch or less for the 10-story tower and approximately ½ to ¾ inch for the western edge of the parking garage. Differential settlement due to liquefaction across the remainder of the parking garage is estimated to be negligible.

It may be feasible to support the proposed 10-story tower and garage structure on shallow foundations; however, the building foundations will need to be designed to tolerate total and differential settlement due to static loads and post-liquefaction settlement. To mitigate potential differential settlement between adjacent foundation elements that would likely be greater than about 1½ inch, we recommend the 10-story office tower be supported on a rigid mat foundation designed to distribute the heavy column loads across the entire building footprint.

The garage structure can likely be supported on a conventional shallow foundation system consisting of continuous and/or spread footings if the estimated total and differential settlements can be tolerated. Accounting for both liquefaction-induced and static differential settlements, we recommend footings along the western side of the garage be design to tolerate total differential movement up to approximately 1½ inch following strong ground shaking in the region. On a preliminary basis, this increased differential settlement should be considered for the western column line, plus at least one additional column line to the east. Detailed foundation recommendations are presented in the “Foundations” section.

### **5.1.2 Presence of Undocumented Fill**

As previously discussed, approximately 3 to 5½ feet of undocumented fill material consisting of hard sandy lean clays and medium dense clayey sands was encountered at our boring locations. Records of previous fill placement are not available at this time; therefore, it is not known if the fill was compacted to current compaction standards. Undocumented fill can be variable in thickness, density, and consistency across the site. Since the proposed structures

can likely be supported on shallow foundations, we recommend the fill be completely removed from within the 10-story tower and parking garage footprints and replaced as engineered fill. Recommendations addressing this concern are presented in the “Earthwork” section of this report.

### **5.1.3 Shallow Ground Water**

Ground water was measured at a depth of approximately 15 feet below the existing ground surface in our borings and was inferred at approximately 6½ feet below existing grade in CPT-3. Furthermore, historic high ground water levels are mapped at a depth of approximately 7 to 8 feet below current grades. Our experiences with similar sites in the vicinity indicate that shallow ground water could significantly impact grading and underground construction. These impacts typically consist of potentially wet and unstable pavement subgrade, difficulty achieving compaction, and difficult underground utility installation. Dewatering and shoring of utility trenches may be required in some isolated areas of the site. Detailed recommendations addressing this concern are presented in the “Earthwork” section of this report.

## **5.2 PLANS AND SPECIFICATIONS REVIEW**

We recommend that we be retained to review the geotechnical aspects of the project structural, civil, and landscape plans and specifications, allowing sufficient time to provide the design team with any comments prior to issuing the plans for construction.

## **5.3 CONSTRUCTION OBSERVATION AND TESTING**

As site conditions may vary significantly between the small-diameter borings performed during this investigation, we also recommend that a Cornerstone representative be present to provide geotechnical observation and testing during earthwork and foundation construction. This will allow us to form an opinion and prepare a letter at the end of construction regarding contractor compliance with project plans and specifications, and with the recommendations in our report. We will also be allowed to evaluate any conditions differing from those encountered during our investigation, and provide supplemental recommendations as necessary. For these reasons, the recommendations in this report are contingent of Cornerstone providing observation and testing during construction. Contractors should provide at least a 48-hour notice when scheduling our field personnel.

# **SECTION 6: EARTHWORK**

## **6.1 SITE DEMOLITION, CLEARING AND PREPARATION**

### **6.1.1 Site Stripping**

The site should be stripped of all surface vegetation, and surface and subsurface improvements within the proposed development area. Demolition of existing improvements is discussed in detail below. A detailed discussion of removal of existing fills is provided later in this report. Surface vegetation and topsoil should be stripped to a sufficient depth to remove all material

greater than 3 percent organic content by weight. Based on our site observations, surficial stripping should extend about 3 to 6 inches below existing grade in vegetated areas.

### **6.1.2 Tree and Shrub Removal**

Trees and shrubs designated for removal should have the root balls and any roots greater than ½-inch diameter removed completely. Mature trees are estimated to have root balls extending to depths of 2 to 4 feet, depending on the tree size. Significant root zones are anticipated to extend to the diameter of the tree canopy. Grade depressions resulting from root ball removal should be cleaned of loose material and backfilled in accordance with the recommendations in the “Compaction” section of this report.

### **6.1.3 Demolition of Existing Slabs, Foundations and Pavements**

All slabs, foundations, and pavements should be completely removed from within planned building areas. Slabs, foundations, and pavements that extend into planned flatwork, pavement, or landscape areas may be left in place provided there is at least 3 feet of engineered fill overlying the remaining materials, they are shown not to conflict with new utilities, and that asphalt and concrete more than 10 feet square is broken up to provide subsurface drainage. A discussion of recycling existing improvements is provided later in this report.

### **6.1.4 Abandonment of Existing Utilities**

All utilities should be completely removed from within planned building areas. For any utility line to be considered acceptable to remain within building areas, the utility line must be completely backfilled with grout or sand-cement slurry (sand slurry is not acceptable), the ends outside the building area capped with concrete, and the trench fills either removed and replaced as engineered fill with the trench side slopes flattened to at least 1:1, or the trench fills are determined not to be a risk to the structure. The assessment of the level of risk posed by the particular utility line will determine whether the utility may be abandoned in place or needs to be completely removed. The contractor should assume that all utilities will be removed from within building areas unless provided written confirmation from both the owner and the geotechnical engineer.

Utilities extending beyond the building areas may be abandoned in place provided the ends are plugged with concrete, they do not conflict with planned improvements, and that the trench fills do not pose significant risk to the planned surface improvements.

The risks associated with abandoning utilities in place include the potential for future differential settlement of existing trench fills, and/or partial collapse and potential ground loss into utility lines that are not completely filled with grout. In general, the risk is relatively low for single utility lines less than 4 inches in diameter, and increases with increasing pipe diameter.

## **6.2 REMOVAL OF EXISTING FILLS**

As previously stated, approximately 3 to 5½ feet of fill was encountered in our borings. All fills should be completely removed from within building areas and to a lateral distance of at least 5 feet beyond the building footprint or to a lateral distance equal to fill depth below the perimeter footing, whichever is greater. Based on our experience for sites with past development such as this, the depth and limit of the undocumented fill can vary greatly and therefore should be expected. At your option and to more accurately estimate the undocumented fill, a supplemental field exploration including test pits can be performed during the site mass grading phase. The above fill estimates can be evaluated further based on the actual field conditions encountered at the time of construction. Provided the fills meet the “Material for Fill” requirements below, the fills may be reused when backfilling the excavations. If materials are encountered that do not meet the requirements, such as debris, wood, trash, those materials should be screened out of the remaining material and be removed from the site. Backfill of excavations should be placed in lifts and compacted in accordance with the “Compaction” section below.

Fills extending into planned pavement and flatwork areas may be left in place provided they are determined to be a low risk for future differential settlement and that the upper 12 inches of fill below pavement subgrade is re-worked and compacted as discussed in the “Compaction” section below.

## **6.3 TEMPORARY CUT AND FILL SLOPES**

The contractor is responsible for maintaining all temporary slopes and providing temporary shoring where required. Temporary shoring, bracing, and cuts/fills should be performed in accordance with the strictest government safety standards. On a preliminary basis, the upper 10 feet at the site may be classified as OSHA Type C materials. A Cornerstone representative should be retained to confirm the preliminary site classification.

Excavations performed during site demolition and fill removal should be sloped at 3:1 (horizontal:vertical) within the upper 5 feet below building subgrade. Excavations extending more than 5 feet below building subgrade and excavations in pavement and flatwork areas should be slope at a 1:1 inclination unless the OSHA soil classification indicates otherwise.

## **6.4 SUBGRADE PREPARATION**

After site clearing and demolition is complete, and prior to backfilling any excavations resulting from fill removal or demolition, the excavation subgrade and subgrade within areas to receive additional site fills, slabs-on-grade and/or pavements should be scarified to a depth of 6 inches, moisture conditioned, and compacted in accordance with the “Compaction” section below.

## **6.5 SUBGRADE STABILIZATION MEASURES**

Soil subgrade and fill materials, especially soils with high fines contents such as clays and silty soils, can become unstable due to high moisture content, whether from high in-situ moisture

contents or from winter rains. As the moisture content increases over the laboratory optimum, it becomes more likely the materials will be subject to softening and yielding (pumping) from construction loading or become unworkable during placement and compaction.

As discussed in the “Subsurface” section in this report, the in-situ moisture contents range from approximately the estimated laboratory optimum moisture to 10 percent over the estimated laboratory optimum moisture in the upper 10 feet of the soil profile. The contractor should anticipate potentially needing to dry the soils prior to reusing them as fill. In addition, repetitive rubber-tire loading could de-stabilize the soils.

There are several methods to address potential unstable soil conditions and facilitate fill placement and trench backfill. Some of the methods are briefly discussed below. Implementation of the appropriate stabilization measures should be evaluated on a case-by-case basis according to the project construction goals and the particular site conditions.

### **6.5.1 Scarification and Drying**

The subgrade may be scarified to a depth of 8 to 12 inches and allowed to dry to near optimum conditions, if sufficient dry weather is anticipated to allow sufficient drying. More than one round of scarification may be needed to break up the soil clods.

### **6.5.2 Removal and Replacement**

As an alternative, the contractor may choose to over-excavate the unstable soils and replace them with dry on-site or import materials. A Cornerstone representative should be present to provide recommendations regarding the appropriate depth of over-excavation, whether a geosynthetic (stabilization fabric or geogrid) is recommended, and what materials are recommended for backfill.

### **6.5.3 Chemical Treatment**

Where the unstable area exceeds about 5,000 to 10,000 square feet and/or site winterization is desired, chemical treatment with quicklime (CaO), kiln-dust, or cement may be more cost-effective than removal and replacement. Recommended chemical treatment depths will typically range from 12 to 18 inches depending on the magnitude of the instability.

## **6.6 MATERIAL FOR FILL**

### **6.6.1 Re-Use of On-site Soils**

On-site soils with an organic content less than 3 percent by weight may be reused as general fill. General fill should not have lumps, clods or cobble pieces larger than 6 inches in diameter; 85 percent of the fill should be smaller than 2½ inches in diameter. Minor amounts of oversize material (smaller than 12 inches in diameter) may be allowed provided the oversized pieces are not allowed to nest together and the compaction method will allow for loosely placed lifts not exceeding 12 inches.

### **6.6.2 Re-Use of On-Site Site Improvements**

We anticipate that asphalt concrete (AC) grindings and aggregate base (AB) will be generated during site demolition. If the AC grindings are mixed with the underlying AB to meet Class 2 AB specifications, they may be reused within the new pavement and flatwork structural sections. AC/AB grindings may not be reused within the office building footprint area. Laboratory testing will be required to confirm the grindings meet project specifications. Due to existing alligator cracking of some locations of the AC pavements, it is likely that the grinding operation could leave oversize chunks and won't meet the Class 2 AB gradation requirements but may meet Caltrans subbase requirements. Depending on the quantities of oversized material, the grindings may still be used within the structural section; however, the pavement design will need to be modified to account for the difference, typically resulting in the addition of about 1 inch to the structural section.

### **6.6.3 Potential Import Sources**

Imported materials should be inorganic with a Plasticity Index (PI) of 15 or less, and not contain recycled asphalt concrete where it will be used within the office building footprint areas. To prevent significant caving during trenching or foundation construction, imported material should have sufficient fines. Samples of potential import sources should be delivered to our office at least 10 days prior to the desired import start date. Information regarding the import source should be provided, such as any site geotechnical reports. If the material will be derived from an excavation rather than a stockpile, potholes will likely be required to collect samples from throughout the depth of the planned cut that will be imported. At a minimum, laboratory testing will include PI tests. Material data sheets for select fill materials (Class 2 aggregate base, ¾-inch crushed rock, quarry fines, etc.) listing current laboratory testing data (not older than 6 months from the import date) may be provided for our review without providing a sample. If current data is not available, specification testing will need to be completed prior to approval.

Environmental and soil corrosion characterization should also be considered by the project team prior to acceptance. Suitable environmental laboratory data to the planned import quantity should be provided to the project environmental consultant; additional laboratory testing may be required based on the project environmental consultant's review. The potential import source should also not be more corrosive than the on-site soils, based on pH, saturated resistivity, and soluble sulfate and chloride testing.

## **6.7 COMPACTION REQUIREMENTS**

All fills, and subgrade areas where fill, slabs-on-grade, and pavements are planned, should be placed in loose lifts 8 inches thick or less and compacted in accordance with ASTM D1557 (latest version) requirements as shown in the table below. In general, clayey soils should be compacted with sheepsfoot equipment and sandy/gravelly soils with vibratory equipment; open-graded materials such as crushed rock should be placed in lifts no thicker than 18 inches and consolidated in place with vibratory equipment. Each lift of fill and all subgrade should be firm and unyielding under construction equipment loading in addition to meeting the compaction requirements to be approved. The contractor (with input from a Cornerstone representative)

should evaluate the in-situ moisture conditions, as the use of vibratory equipment on soils with high moistures can cause unstable conditions. General recommendations for soil stabilization are provided in the “Subgrade Stabilization Measures” section of this report.

**Table 2: Compaction Requirements**

Description	Material Description	Minimum Relative Compaction (percent) <sup>1</sup>	Moisture <sup>2</sup> Content (percent)
General Fill (within upper 5 feet)	On-Site Soils	90	>1
General Fill (below a depth of 5 feet)	On-Site Soils	95	>1
Trench Backfill	On-Site Soils	90	>1
Trench Backfill (upper 6 inches of subgrade)	On-Site Soils	95	>1
Crushed Rock Fill	¾-inch Clean Crushed Rock	Consolidate In-Place	NA
Non-Expansive Fill	Imported Non-Expansive Fill	90	Optimum
Flatwork Subgrade	On-Site Soils	90	>1
Flatwork Aggregate Base	Class 2 Aggregate Base <sup>3</sup>	90	Optimum
Pavement Subgrade	On-Site Soils	95	>1
Pavement Aggregate Base	Class 2 Aggregate Base <sup>3</sup>	95	Optimum
Asphalt Concrete	Asphalt Concrete	95	NA

1 – Relative compaction based on maximum density determined by ASTM D1557 (latest version)

2 – Moisture content based on optimum moisture content determined by ASTM D1557 (latest version)

3 – Class 2 aggregate base shall conform to Caltrans Standard Specifications, latest edition, except that the relative compaction should be determined by ASTM D1557 (latest version)

4 – Using light-weight compaction or walls should be braced

## 6.8 TRENCH BACKFILL

Utility lines constructed within public right-of-way should be trenched, bedded and shaded, and backfilled in accordance with the local or governing jurisdictional requirements. Utility lines in private improvement areas should be constructed in accordance with the following requirements unless superseded by other governing requirements.

All utility lines should be bedded and shaded to at least 6 inches over the top of the lines with crushed rock (¾-inch-diameter or greater) or well-graded sand and gravel materials conforming to the pipe manufacturer’s requirements. Open-graded shading materials should be consolidated in place with vibratory equipment and well-graded materials should be compacted to at least 90 percent relative compaction with vibratory equipment prior to placing subsequent backfill materials.

General backfill over shading materials may consist of on-site native materials provided they meet the requirements in the “Material for Fill” section, and are moisture conditioned and compacted in accordance with the requirements in the “Compaction” section.

Where utility lines will cross perpendicular to strip footings, the footing should be deepened to encase the utility line, providing sleeves or flexible cushions to protect the pipes from anticipated foundation settlement, or the utility lines should be backfilled to the bottom of footing with sand-cement slurry or lean concrete. Where utility lines will parallel footings and will extend below the “foundation plane of influence,” an imaginary 1:1 plane projected down from the bottom edge of the footing, either the footing will need to be deepened so that the pipe is above the foundation plane of influence or the utility trench will need to be backfilled with sand-cement slurry or lean concrete within the influence zone. Sand-cement slurry used within foundation influence zones should have a minimum compressive strength of 75 psi.

## **6.9 SITE DRAINAGE**

Ponding should not be allowed on or adjacent to building foundations, slabs-on-grade, or pavements. Hardscape surfaces should slope at least 2 percent towards suitable discharge facilities; landscape areas should slope at least 3 percent towards suitable discharge facilities. Roof runoff should be directed away from building areas in closed conduits, to approved infiltration facilities, or on to hardscaped surfaces that drain to suitable facilities. Retention, detention or infiltration facilities should be spaced at least 10 feet from buildings, and preferably at least 5 feet from slabs-on-grade or pavements. However, if retention, detention or infiltration facilities are located within these zones, we recommend that these treatment facilities meet the requirements in the Storm Water Treatment Design Considerations section of this report.

## **6.10 LOW-IMPACT DEVELOPMENT (LID) IMPROVEMENTS**

The Municipal Regional Permit (MRP) requires regulated projects to treat 100 percent of the amount of runoff identified in Provision C.3.d from a regulated project’s drainage area with low impact development (LID) treatment measures onsite or at a joint stormwater treatment facility. LID treatment measures are defined as rainwater harvesting and use, infiltration, evapotranspiration, or biotreatment. A biotreatment system may only be used if it is infeasible to implement harvesting and use, infiltration, or evapotranspiration at a project site.

Technical infeasibility of infiltration may result from site conditions that restrict the operability of infiltration measures and devices. Various factors affecting the feasibility of infiltration treatment may create an environmental risk, structural stability risk, or physically restrict infiltration. The presence of any of these limiting factors may render infiltration technically infeasible for a proposed project. To aid in determining if infiltration may be feasible at the site, we provide the following site information regarding factors that may aid in determining the feasibility of infiltration facilities at the site.

- The near-surface materials at the site are clayey, and categorized as Hydrologic Soil Group D, and are expected to have infiltration rates of less than 0.2 inches per hour. In our opinion, these clayey soils will significantly limit the infiltration of stormwater.
- Locally, seasonal high ground water is mapped at a depth of approximately 7 to 8 feet. Therefore, ground water is expected to be within 10 feet of the base of infiltration measures.

- Infiltration measures, devices, or facilities may conflict with the location of existing or proposed underground utilities or easements. Infiltration measures, devices, or facilities should not be placed on top of or very near to underground utilities such that they discharge to the utility trench, restrict access, or cause stability concerns.

### **6.10.1 Storm Water Treatment Design Considerations**

If storm water treatment improvements, such as shallow bio-retention swales, basins or pervious pavements, are required as part of the site improvements to satisfy Storm Water Quality (C.3) requirements, we recommend the following items be considered for design and construction.

#### **6.10.1.1 General Bioswale Design Guidelines**

- If possible, avoid placing bioswales or basins within 10 feet of the building perimeter or within 5 feet of exterior flatwork or pavements. If bioswales must be constructed within these setbacks, the side(s) and bottom of the trench excavation should be lined with 10-mil visqueen to reduce water infiltration into the surrounding expansive clay.
- Bioswales constructed within 3 feet of proposed buildings may be within the foundation zone of influence for perimeter wall loads. Therefore, where bioswales will parallel foundations and will extend below the “foundation plane of influence,” an imaginary 1:1 plane projected down from the bottom edge of the foundation, the foundation will need to be deepened so that the bottom edge of the bioswale filter material is above the foundation plane of influence.
- The bottom of bioswale or detention areas should include a perforated drain placed at a low point, such as a shallow trench or sloped bottom, to reduce water infiltration into the surrounding soils near structural improvements, and to address the low infiltration capacity of the on-site clay soils.

#### **6.10.1.2 Bioswale Infiltration Material**

- Gradation specifications for bioswale filter material, if required, should be specified on the grading and improvement plans.
- Compaction requirements for bioswale filter material in non-landscaped areas or in pervious pavement areas, if any, should be indicated on the plans and specifications to satisfy the anticipated use of the infiltration area.
- If required, infiltration (percolation) testing should be performed on representative samples of potential bioswale materials prior to construction to check for general conformance with the specified infiltration rates.

- It should be noted that multiple laboratory tests may be required to evaluate the properties of the bioswale materials, including percolation, landscape suitability and possibly environmental analytical testing depending on the source of the material. We recommend that the landscape architect provide input on the required landscape suitability tests if bioswales are to be planted.
- If bioswales are to be vegetated, the landscape architect should select planting materials that do not reduce or inhibit the water infiltration rate, such as covering the bioswale with grass sod containing a clayey soil base.
- If required by governing agencies, field infiltration testing should be specified on the grading and improvement plans. The appropriate infiltration test method, duration and frequency of testing should be specified in accordance with local requirements.
- Due to the relatively loose consistency and/or high organic content of many bioswale filter materials, long-term settlement of the bioswale medium should be anticipated. To reduce initial volume loss, bioswale filter material should be wetted in 12 inch lifts during placement to pre-consolidate the material. Mechanical compaction should not be allowed, unless specified on the grading and improvement plans, since this could significantly decrease the infiltration rate of the bioswale materials.
- It should be noted that the volume of bioswale filter material may decrease over time depending on the organic content of the material. Additional filter material may need to be added to bioswales after the initial exposure to winter rains and periodically over the life of the bioswale areas, as needed.

#### 6.10.1.3 Bioswale Construction Adjacent to Pavements

If bio-infiltration swales or basins are considered adjacent to proposed parking lots or exterior flatwork, we recommend that mitigative measures be considered in the design and construction of these facilities to reduce potential impacts to flatwork or pavements. Exterior flatwork, concrete curbs, and pavements located directly adjacent to bio-swales may be susceptible to settlement or lateral movement, depending on the configuration of the bioswale and the setback between the improvements and edge of the swale. To reduce the potential for distress to these improvements due to vertical or lateral movement, the following options should be considered by the project civil engineer:

- Improvements should be setback from the vertical edge of a bioswale such that there is at least 1 foot of horizontal distance between the edge of improvements and the top edge of the bioswale excavation for every 1 foot of vertical bioswale depth, or
- Concrete curbs for pavements, or lateral restraint for exterior flatwork, located directly adjacent to a vertical bioswale cut should be designed to resist lateral earth pressures in accordance with the recommendations in the “Retaining Walls” section of this report, or concrete curbs or edge restraint should be adequately keyed into the native soil or engineered to reduce the potential for rotation or lateral movement of the curbs.

## 6.11 LANDSCAPE CONSIDERATIONS

Since the near-surface soils are moderately expansive, we recommend greatly reducing the amount of surface water infiltrating these soils near foundations and exterior slabs-on-grade. This can typically be achieved by:

- Using drip irrigation,
- Avoiding open planting within 3 feet of the building perimeter or near the top of existing slopes,
- Regulating the amount of water distributed to lawns or planter areas by using irrigation timers, and
- Selecting landscaping that requires little or no watering, especially near foundations.

We recommend that the landscape architect consider these items when developing landscaping plans.

## SECTION 7: FOUNDATIONS

### 7.1 SUMMARY OF RECOMMENDATIONS

In our opinion, the proposed structures may be supported on shallow foundations provided they can be designed for both static and seismic total and differential settlement and the recommendations in the “Earthwork” section and the sections below are followed.

### 7.2 SEISMIC DESIGN CRITERIA

The project structural design will likely be based on the 2013 California Building Code (CBC), which provides criteria for the seismic design of buildings in Chapter 16. The “Seismic Coefficients” used to design buildings are established based on a series of tables and figures addressing different site factors, including the soil profile in the upper 100 feet below grade and mapped spectral acceleration parameters based on distance to the controlling seismic source/fault system. Based on our borings and review of local geology, the site is underlain by deep alluvial soils with typical SPT “N” values between 15 and 50 blows per foot. Therefore, we have classified the site as Soil Classification D. The mapped spectral acceleration parameters  $S_s$  and  $S_1$  were calculated using the USGS computer program *Design Maps*, located at <http://geohazards.usgs.gov/designmaps/us/application.php> based on the site coordinates presented below and the site classification. The table below lists the various factors used to determine the seismic coefficients and other parameters.

**Table 3: CBC Site Categorization and Site Coefficients**

Classification/Coefficient	Design Value
Site Class	D
Site Latitude	37.36247°
Site Longitude	-121.91612°
0.2-second Period Mapped Spectral Acceleration <sup>1</sup> , $S_s$	1.500g
1-second Period Mapped Spectral Acceleration <sup>1</sup> , $S_1$	0.600g
Short-Period Site Coefficient – $F_a$	1.0
Long-Period Site Coefficient – $F_v$	1.5
0.2-second Period, Maximum Considered Earthquake Spectral Response Acceleration Adjusted for Site Effects - $S_{MS}$	1.500g
1-second Period, Maximum Considered Earthquake Spectral Response Acceleration Adjusted for Site Effects – $S_{M1}$	0.900g
0.2-second Period, Design Earthquake Spectral Response Acceleration – $S_{DS}$	1.000g
1-second Period, Design Earthquake Spectral Response Acceleration – $S_{D1}$	0.600g
Mapped MCE Geometric Mean Peak Ground Acceleration - PGA	0.5g
Site Coefficient Based on PGA and Site Class - $F_{PGA}$	1.0

<sup>1</sup>For Site Class B, 5 percent damped.

### 7.3 MAT FOUNDATION FOR 10-STORY TOWER

As discussed in previous sections of this report, we recommend all undocumented fill material (including fill from previous developments) be removed and replaced as engineered fill in areas of at-grade improvements. Subgrade preparation, fill removal, placement, and compaction should be performed in accordance with recommendations provided in the “Earthwork” section of this report.

Due to the high anticipated total and differential settlement between adjacent building columns, we recommend that the proposed 10-story tower structure be supported on a reinforced concrete mat foundation bearing on undisturbed natural soil or engineered fill prepared in accordance with the “Earthwork” section of this report, and designed in accordance with the recommendations below.

#### 7.3.1 Reinforced Concrete Mats

The tower mat foundation may be designed for a maximum average allowable bearing pressure of 2,000 pounds per square foot (psf) for dead plus live loads; at column or wall loading the maximum localized bearing pressure should not exceed 3,000 psf. When evaluating wind and seismic conditions, the allowable bearing pressures may be increased by one-third. These pressures are net values; the weight of the mat may be neglected for the portion of the mat extending below grade. Top and bottom mats of reinforcing steel should be included as required to help span irregularities and differential settlement.

### **7.3.2 Mat Foundation Settlement**

For our settlement analysis, we assumed an average areal mat pressure of 1,500 psf. Based on the structural load information provided to us and the estimated pressure above, we estimate that static settlements for a perfectly flexible mat foundation would be on the order of  $\frac{3}{4}$  to  $1\frac{1}{2}$  inches around the mat edges and corners and up to 3 inches near the center of the mat. Differential settlement is estimated to be approximately 2 inches from the center of the mat to its edges. Accounting for both static and seismic settlements, a mat foundation could experience combined static and seismic differential settlements on the order of  $2\frac{1}{2}$  inches between the center of the mat to its edges.

If foundations designed in accordance with the above recommendations are not capable of resisting such differential movement, settlement mitigation or an alternative foundation type may be required. Settlement mitigation could possibly include ground improvement to reduce settlement beneath the tower footprint or the use of a deep foundation system. We recommend we be retained to review the final loading and further evaluate the settlement estimates above.

### **7.3.3 Mat Modulus of Soil Subgrade Reaction**

We recommend using a variable modulus of subgrade reaction to provide a more accurate soil response and prediction of shears and moments in the mat. This will require more than one iteration between our initial soil model and the structural SAFE analysis for the mat. As discussed above, we estimated an average areal mat pressure of 1,500 psf within the structure. Based on this pressure, we calculated a preliminary modulus of soil subgrade reaction for the mat foundation.

For the preliminary SAFE runs, we suggest an initial variable modulus of subgrade reaction of 5 pounds per cubic inch (pci) for the central portion of the mat foundation, and 15 pci around the perimeter 20 feet of the mat. As discussed above, these moduli of soil subgrade reaction are intended for use in the first iteration of the structural SAFE analysis for the mat design. We should be retained to review the initial contact pressures and mat deflections, and to provide a revised plan with updated contours of equal modulus of subgrade reaction values following our final analysis. It should be noted that modulus values may change once updated contact pressures are determined; therefore, additional modulus values may be required at locations within the mat footprint.

### **7.3.4 Lateral Loading**

Lateral loads may be resisted by friction between the bottom of mat foundation and the supporting subgrade, and also by passive pressures generated against mat edges. An ultimate frictional resistance of 0.45 applied to the mat dead load, and an ultimate passive pressure based on an equivalent fluid pressure of 450 pcf may be used in design. The structural engineer should apply an appropriate factor of safety (such as 1.5) to the ultimate values above. The upper 12 inches of soil should be neglected when determining passive pressure capacity.

**7.3.5 Mat Foundation Construction Considerations**

Prior to placement of any vapor retarder and mat construction, the subgrade should be proof-rolled and visually observed by a Cornerstone representative to confirm stable subgrade conditions. The pad moisture should also be checked at least 24 hours prior to vapor barrier or mat reinforcement placement to confirm that the soil has a moisture content of at least 2 to 3 percent over optimum in the upper 12 inches.

**7.4 CONVENTIONAL FOOTINGS FOR PARKING GARAGE**

Provided the parking garage can tolerate the anticipated static and seismic differential settlement between adjacent columns, conventional shallow spread footings can be considered. Spread footings should bear on natural, undisturbed soil or engineered fill and extend at least 24 inches below the lowest adjacent grade. Lowest adjacent grade is defined as the deeper of the following: 1) bottom of the adjacent interior slab-on-grade, or 2) finished exterior grade, excluding landscaping topsoil.

To reduce post-construction settlement, footings constructed to the above dimensions and in accordance with the “Earthwork” recommendations of this report should be limited to a maximum allowable bearing pressure of 2,000 psf for dead loads, 3,000 psf for combined dead plus live loads, and 4,000 psf for all loads including wind and seismic. These pressures are based on factors of safety of 3.0, 2.0, and 1.5 applied to the ultimate bearing pressure for dead, dead plus live, and all loads, respectively. These pressures are net values; the weight of the footing may be neglected for the portion of the footing extending below grade (typically, the full footing depth). Top and bottom mats of reinforcing steel should be included in continuous footings to help span irregularities and differential settlement.

**7.4.1 Footing Settlement**

Preliminary structural loading for the proposed parking structure was provided by the structural engineer, as shown in the following table.

**Table 4: Anticipated Structural Loading for Parking Garage**

Foundation Area	Estimated Loads
Interior Isolated Column Footing (maximum dead + live load)	680 kips
Exterior Isolated Column Footing (dead + live load)	400 kips

Based on above loading and allowable bearing pressures, we estimate the total post-construction static settlement will range from approximately ¾ to 1¼ inches, with approximately ½ inch of post-construction differential settlement between adjacent independent foundation elements, assumed to be approximately 40 feet.

In addition, footings along the western portion of the garage should also be designed to accommodate an estimated ½ to 1 inch of seismic differential movement between adjacent foundation elements. Accounting for both liquefaction-induced and static differential settlements, we recommend footings along the western side of the garage be design to tolerate total differential movement up to approximately 1½ inches following strong ground shaking in the region. On a preliminary basis, this increased differential settlement should be considered for the western column line, plus at least one additional column line to the east.

If foundations designed in accordance with the above recommendations are not capable of resisting such differential movement along the west side, settlement mitigation or an alternative foundation type may be required. Settlement mitigation could possibly include ground improvement to reduce seismic settlement beneath the western portion of the garage, the use of a rigid mat foundation, or a deep foundation system. We recommend we be retained to review the final loading and further evaluate the settlement estimates above.

#### **7.4.2 Lateral Loading**

Lateral loads may be resisted by friction between the bottom of footing and the supporting subgrade, and also by passive pressures generated against footing sidewalls. An ultimate frictional resistance of 0.45 applied to the footing dead load, and an ultimate passive pressure based on an equivalent fluid pressure of 450 pcf may be used in design. The structural engineer should apply an appropriate factor of safety to the ultimate values above. Where footings are adjacent to landscape areas without hardscape, the upper 12 inches of soil should be neglected when determining lateral passive pressure resistance.

#### **7.4.3 Spread Footing Construction Considerations**

Where utility lines will cross perpendicular to strip footings, the footing should be deepened to encase the utility line, providing sleeves or flexible cushions to protect the pipes from anticipated foundation settlement.

Where utility lines will parallel footings and extend below the “foundation plane of influence,” an imaginary 1:1 plane projected down from the bottom edge of the footing, either the footing will need to be deepened so that the pipe is above the foundation plane of influence or the utility trench will need to be backfilled with sand-cement slurry or lean concrete within the influence zone. Sand-cement slurry used within foundation influence zones should have a minimum compressive strength of 75 psi.

Footing excavations should be filled as soon as possible or be kept moist until concrete placement by regular sprinkling to prevent desiccation. A Cornerstone representative should observe all footing excavations prior to placing reinforcing steel and concrete. If there is a significant schedule delay between our initial observation and concrete placement, we may need to re-observe the excavations. The Contractor should be notified that some localized sloughing or caving may occur along footing sidewalls due to the sandy soil conditions, especially if footing excavations are left open for extended periods.

## **SECTION 8: CONCRETE SLABS AND PEDESTRIAN PAVEMENTS**

### **8.1 PARKING STRUCTURE SLAB-ON-GRADE**

The garage slab-on-grade should be at least 5 inches thick and if constructed with minimal reinforcement intended for shrinkage control only, should have a minimum compressive strength of 3,000 psi. If the slab will have heavier reinforcing because the slab will also serve as a structural diaphragm, the compressive strength may be reduced to 2,500 psi at the structural engineer's discretion. The garage slab should also be supported on at least 6 inches of select fill consisting of one of the following placed and compacted in accordance with the "Compaction" section of this report:

- Class 2 aggregate base,
- $\frac{3}{4}$ -inch clean, crushed rock

If there will be areas within the garage that are moisture sensitive, such as equipment and elevator rooms, the recommendations in the "Interior Slabs Moisture Protection Considerations" section below may be incorporated in the project design if desired. Consideration should be given to limiting the control joint spacing to a maximum of about 2 feet in each direction for each inch of concrete thickness, with a maximum control joint spacing of 15 feet.

### **8.2 INTERIOR SLABS MOISTURE PROTECTION CONSIDERATIONS**

The following general guidelines for concrete slab-on-grade construction where floor coverings are planned are presented for the consideration by the developer, design team, and contractor. These guidelines are based on information obtained from a variety of sources, including the American Concrete Institute (ACI) and are intended to reduce the potential for moisture-related problems causing floor covering failures, and may be supplemented as necessary based on project-specific requirements. The application of these guidelines or not will not affect the geotechnical aspects of the slab-on-grade performance.

- Place a minimum 10-mil thick vapor retarder conforming to ASTM E 1745, Class C requirements or better directly below the concrete slab; the vapor retarder should extend to the slab edges and be sealed at all seams and penetrations in accordance with manufacturer's recommendations and ASTM E 1643 requirements. A 4-inch-thick capillary break, consisting of  $\frac{1}{2}$ - to  $\frac{3}{4}$ -inch crushed rock with less than 5 percent passing the No. 200 sieve, should be placed below the vapor retarder and consolidated in place with vibratory equipment.
- The concrete water:cement ratio should be 0.45 or less. Mid-range plasticizers may be used to increase concrete workability and facilitate pumping and placement.
- Water should not be added after initial batching unless the slump is less than specified and/or the resulting water:cement ratio will not exceed 0.45.
- Polishing the concrete surface with metal trowels is not recommended.

- Where floor coverings are planned, all concrete surfaces should be properly cured.
- Water vapor emission levels and concrete pH should be determined in accordance with ASTM F1869-98 and F710-98 requirements and evaluated against the floor covering manufacturer's requirements prior to installation.

### **8.3 EXTERIOR FLATWORK**

#### **8.3.1 Pedestrian Concrete Flatwork**

Exterior concrete flatwork subject to pedestrian and/or occasional light pick up loading should be at least 4 inches thick and supported on at least 4 inches of Class 2 aggregate base overlying subgrade prepared in accordance with the "Earthwork" recommendations of this report. Flatwork that will be subject to heavier or frequent vehicular loading should be designed in accordance with the recommendations in the "Vehicular Pavements" section below. To help reduce the potential for uncontrolled shrinkage cracking, adequate expansion and control joints should be included. Consideration should be given to limiting the control joint spacing to a maximum of about 2 feet in each direction for each inch of concrete thickness.

#### **8.3.2 Pedestrian Pavers**

Concrete unit pavers subject to pedestrian and/or occasional light pick up loading should be at least 60 mm thick and supported on at least 4 inches of Class 2 aggregate base overlying subgrade prepared in accordance with the "Earthwork" recommendations of this report. A maximum 1-inch-thick layer of sand may be used as a leveling/setting bed over the aggregate base. Pavers that will be subject to heavier or frequent vehicular loading should be designed in accordance with the recommendations in the "Vehicular Pavements" section below.

## **SECTION 9: VEHICULAR PAVEMENTS**

### **9.1 ASPHALT CONCRETE**

The following asphalt concrete pavement recommendations tabulated below are based on the Caltrans Highway Design Manual (latest edition), estimated traffic indices for various pavement-loading conditions, and on a subgrade design R-value of 5. The design R-value was chosen based on our experience in this area of San Jose, the clayey near-surface soils encountered in our borings, and our engineering judgment considering the variable surface conditions.

**Table 5: Asphalt Concrete Pavement Recommendations, Design R-value = 5**

Design Traffic Index (TI)	Asphalt Concrete (inches)	Class 2 Aggregate Base* (inches)	Total Pavement Section Thickness (inches)
4.0	2.5	7.5	10.0
4.5	2.5	9.0	11.5
5.0	3.0	10.0	13.0
5.5	3.0	11.5	14.5
6.0	3.5	12.0	15.5
6.5	4.0	12.0	16.0

\*Caltrans Class 2 aggregate base; minimum R-value of 78

Frequently, the full asphalt concrete section is not constructed prior to construction traffic loading. This can result in significant loss of asphalt concrete layer life, rutting, or other pavement failures. To improve the pavement life and reduce the potential for pavement distress through construction, we recommend the full design asphalt concrete section be constructed prior to construction traffic loading. Alternatively, a higher traffic index may be chosen for the areas where construction traffic will be using the pavements.

## 9.2 PORTLAND CEMENT CONCRETE

The exterior Portland Cement Concrete (PCC) pavement recommendations tabulated below are based on methods presented in the Portland Cement Association (PCA) design manual (PCA, 1984). Recommendations for garage slabs-on-grade were provided in the “Concrete Slabs and Pedestrian Pavements” section above. We have provided a few pavement alternatives as an anticipated Average Daily Truck Traffic (ADTT) was not provided. An allowable ADTT should be chosen that is greater than what is expected for the development.

**Table 6: PCC Pavement Recommendations, Design R-value = 5**

Allowable ADTT	Minimum PCC Thickness (inches)
0.8	5.0
13	5.5
130	6.0

The PCC thicknesses above are based on a concrete compressive strength of at least 3,500 psi, supporting the PCC on at least 6 inches of Class 2 aggregate base compacted as recommended in the “Earthwork” section, and laterally restraining the PCC with curbs or concrete shoulders. Adequate expansion and control joints should be included. Consideration

should be given to limiting the control joint spacing to a maximum of about 2 feet in each direction for each inch of concrete thickness.

### 9.3 VEHICULAR CONCRETE UNIT PAVERS

Where vehicular concrete unit pavers are desired in standard traffic areas, we recommend that the pavers be underlain by a 6-inch-thick concrete sub-slab designed as discussed above, including the aggregate base section. Pavers should be placed on a bituminous or mortar setting bed over the concrete sub-slab. Where the pavers will be used as an emergency vehicle access (EVA), the pavers should be placed over at least 12 inches of Class 2 aggregate base and prepared subgrade as recommended in the “Earthwork” section. A maximum 1 inch thick sand setting bed may be used to level the pavers on the aggregate base.

### 9.4 PAVEMENT CUTOFF

Surface water penetration into the pavement section can significantly reduce the pavement life, due to the moderately expansive clays. While quantifying the life reduction is difficult, a normal 20-year pavement design could be reduced to less than 10 years; therefore, increased long-term maintenance may be required.

It would be beneficial to include a pavement cut-off, such as deepened curbs, redwood-headers, or “Deep-Root Moisture Barriers” that are keyed at least 4 inches into the pavement subgrade. This will help limit the additional long-term maintenance.

## SECTION 10: RETAINING WALLS

### 10.1 STATIC LATERAL EARTH PRESSURES

The structural design of any site retaining wall should include resistance to lateral earth pressures that develop from the soil behind the wall, any undrained water pressure, and surcharge loads acting behind the wall. Provided a drainage system is constructed behind the wall to prevent the build-up of hydrostatic pressures as discussed in the section below, we recommend that the walls with level backfill be designed for the following pressures:

**Table 7: Recommended Lateral Earth Pressures**

Wall Condition	Lateral Earth Pressure*	Additional Surcharge Loads
Unrestrained – Cantilever Wall	45 pcf	1/3 of vertical loads at top of wall
Restrained – Braced Wall	45 pcf + 8H** psf	1/2 of vertical loads at top of wall

\* Lateral earth pressures are based on an equivalent fluid pressure for level backfill conditions

\*\* H is the distance in feet between the bottom of footing and top of retained soil

If adequate drainage cannot be provided behind the wall, an additional equivalent fluid pressure of 40 pcf should be added to the values above for both restrained and unrestrained walls for the

portion of the wall that will not have drainage. Damp proofing or waterproofing of the walls may be considered where moisture penetration and/or efflorescence are not desired.

## **10.2 SEISMIC LATERAL EARTH PRESSURES**

The 2013 CBC states that lateral pressures from earthquakes should be considered in the design of basements and retaining walls. At this time, we are not aware of any retaining walls for the project. However, minor landscaping walls (i.e. walls 4 feet or less in height) may be proposed. In our opinion, design of these walls for seismic lateral earth pressures in addition to static earth pressures is not warranted.

## **10.3 WALL DRAINAGE**

Adequate drainage should be provided by a subdrain system behind all walls. This system should consist of a 4-inch minimum diameter perforated pipe placed near the base of the wall (perforations placed downward). The pipe should be bedded and backfilled with Class 2 Permeable Material per Caltrans Standard Specifications, latest edition. The permeable backfill should extend at least 12 inches out from the wall and to within 2 feet of outside finished grade. Alternatively, ½-inch to ¾-inch crushed rock may be used in place of the Class 2 Permeable Material provided the crushed rock and pipe are enclosed in filter fabric, such as Mirafi 140N or approved equivalent. The upper 2 feet of wall backfill should consist of compacted on-site soil. The subdrain outlet should be connected to a free-draining outlet or sump.

Miradrain, Geotech Drainage Panels, or equivalent drainage matting can be used for wall drainage as an alternative to the Class 2 Permeable Material or drain rock backfill. Horizontal strip drains connecting to the vertical drainage matting may be used in lieu of the perforated pipe and crushed rock section. The vertical drainage panel should be connected to the perforated pipe or horizontal drainage strip at the base of the wall, or to some other closed or through-wall system such as the TotalDrain system from AmerDrain. Sections of horizontal drainage strips should be connected with either the manufacturer's connector pieces or by pulling back the filter fabric, overlapping the panel dimples, and replacing the filter fabric over the connection. At corners, a corner guard, corner connection insert, or a section of crushed rock covered with filter fabric must be used to maintain the drainage path.

Drainage panels should terminate 18 to 24 inches from final exterior grade. The Miradrain panel filter fabric should be extended over the top of and behind the panel to protect it from intrusion of the adjacent soil.

## **10.4 BACKFILL**

Where surface improvements will be located over the retaining wall backfill, backfill placed behind the walls should be compacted to at least 95 percent relative compaction using light compaction equipment. Where no surface improvements are planned, backfill should be compacted to at least 90 percent. If heavy compaction equipment is used, the walls should be temporarily braced.

## **10.5 FOUNDATIONS**

Retaining walls may be supported on a continuous spread footing designed in accordance with the recommendations presented in the “Foundations” section of this report.

## **SECTION 11: LIMITATIONS**

This report, an instrument of professional service, has been prepared for the sole use of Kenneth Rodrigues & Partners specifically to support the design of the Skyport Plaza Hotel/Office project in San Jose, California. The opinions, conclusions, and recommendations presented in this report have been formulated in accordance with accepted geotechnical engineering practices that exist in Northern California at the time this report was prepared. No warranty, expressed or implied, is made or should be inferred.

Recommendations in this report are based upon the soil and ground water conditions encountered during our subsurface exploration. If variations or unsuitable conditions are encountered during construction, Cornerstone must be contacted to provide supplemental recommendations, as needed.

Kenneth Rodrigues & Partners may have provided Cornerstone with plans, reports and other documents prepared by others. Kenneth Rodrigues & Partners understands that Cornerstone reviewed and relied on the information presented in these documents and cannot be responsible for their accuracy.

Cornerstone prepared this report with the understanding that it is the responsibility of the owner or his representatives to see that the recommendations contained in this report are presented to other members of the design team and incorporated into the project plans and specifications, and that appropriate actions are taken to implement the geotechnical recommendations during construction.

Conclusions and recommendations presented in this report are valid as of the present time for the development as currently planned. Changes in the condition of the property or adjacent properties may occur with the passage of time, whether by natural processes or the acts of other persons. In addition, changes in applicable or appropriate standards may occur through legislation or the broadening of knowledge. Therefore, the conclusions and recommendations presented in this report may be invalidated, wholly or in part, by changes beyond Cornerstone’s control. This report should be reviewed by Cornerstone after a period of three (3) years has elapsed from the date of this report. In addition, if the current project design is changed, then Cornerstone must review the proposed changes and provide supplemental recommendations, as needed.

An electronic transmission of this report may also have been issued. While Cornerstone has taken precautions to produce a complete and secure electronic transmission, please check the electronic transmission against the hard copy version for conformity.

Recommendations provided in this report are based on the assumption that Cornerstone will be retained to provide observation and testing services during construction to confirm that conditions are similar to that assumed for design, and to form an opinion as to whether the work has been performed in accordance with the project plans and specifications. If we are not retained for these services, Cornerstone cannot assume any responsibility for any potential claims that may arise during or after construction as a result of misuse or misinterpretation of Cornerstone's report by others. Furthermore, Cornerstone will cease to be the Geotechnical-Engineer-of-Record if we are not retained for these services.

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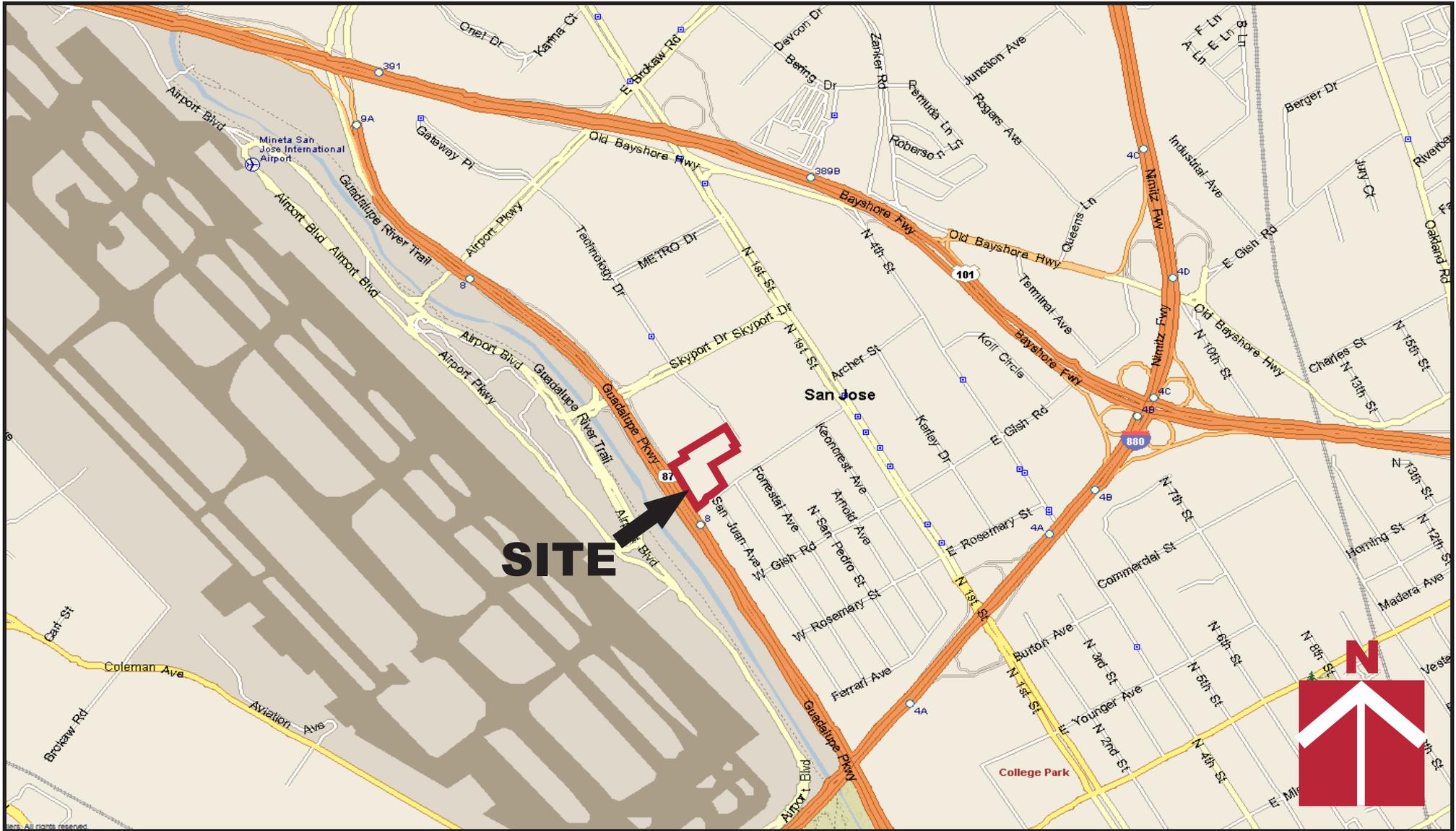
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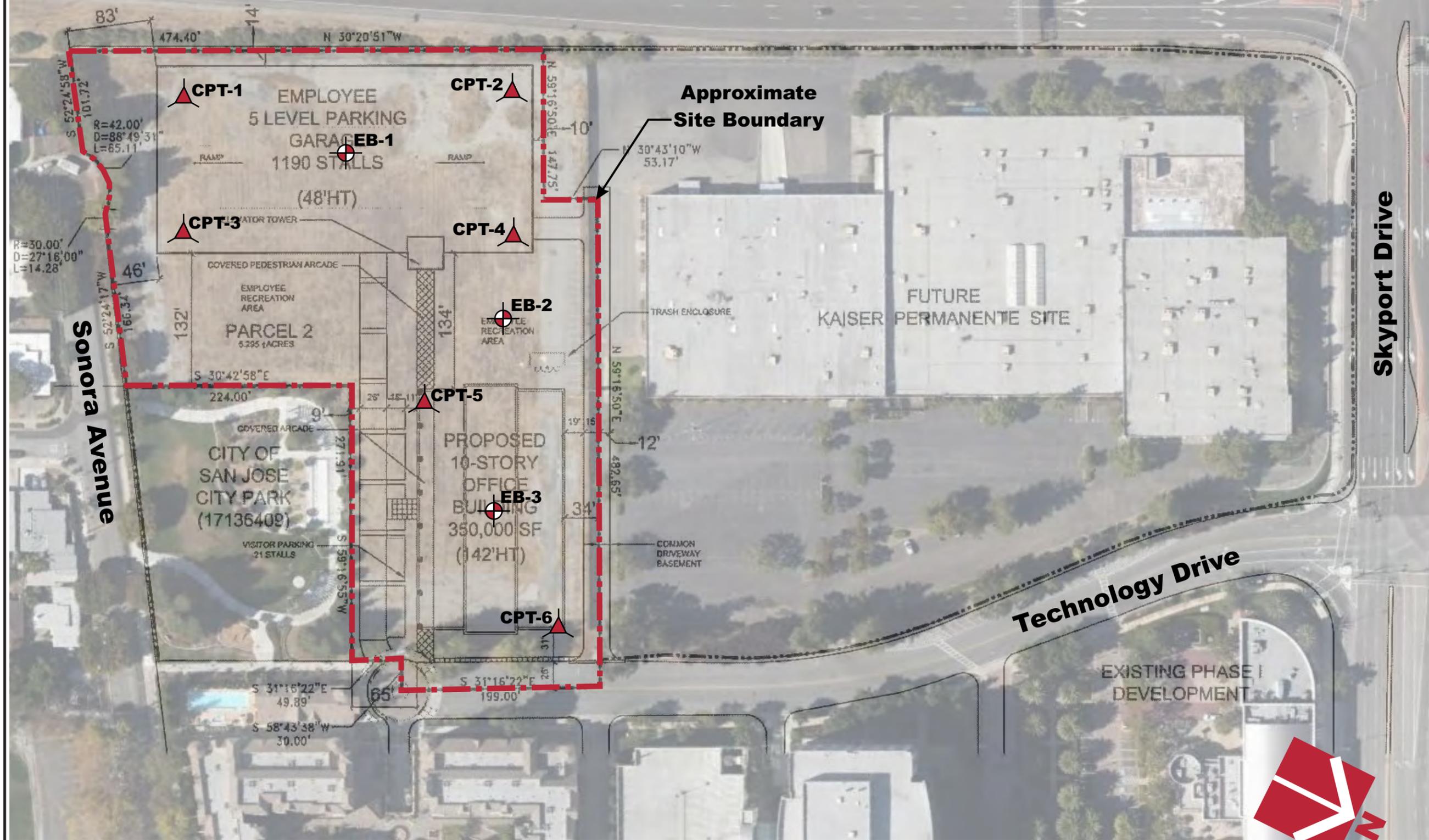

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Vicinity Map

**Skyport Plaza Hotel/Office**  
**San Jose, CA**

Project Number	704-1-1
Figure Number	Figure 1
Date	March 2014
Drawn By	RRN

Highway 87



Project Number  
704-1-1

Figure Number  
Figure 2

Date  
March 2014

Drawn By  
RRN

Site Plan

Skyport Plaza Hotel/Office  
San Jose, CA

**CORNERSTONE**  
**EARTH GROUP**

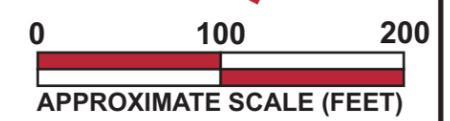
**Legend**



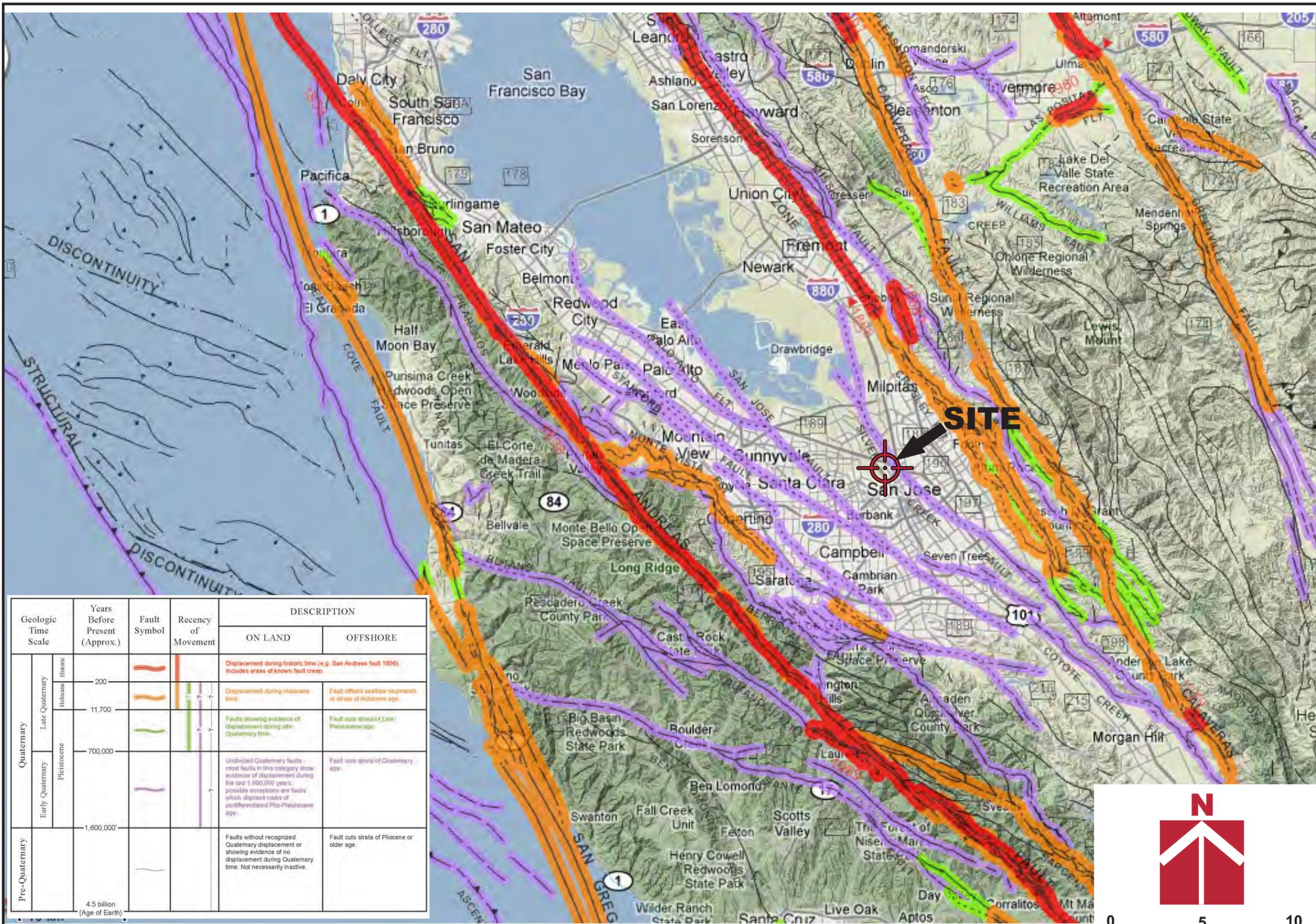
Approximate location of exploratory boring (EB)



Approximate location of cone penetration test (CPT)

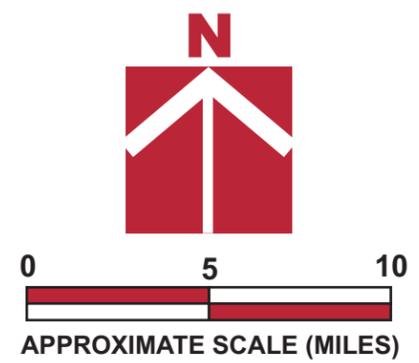


Base by Google Earth, dated 9/11/2012  
Overlay by Kenneth Rodrigues & Partners, Inc., "Conceptual Site Plan - 1.2," dated 8/26/2013



Geologic Time Scale	Years Before Present (Approx.)	Fault Symbol	Recency of Movement	DESCRIPTION	
				ON LAND	OFFSHORE
Quaternary	Holocene			Displacement during historic time (e.g. San Andreas fault 1906). Includes areas of known fault creep.	
	Late Quaternary			Displacement during Holocene time.	Fault offsets seafloor sediments or strata of Holocene age.
Early Quaternary	Pleistocene			Faults showing evidence of displacement during late Quaternary time.	Fault cuts strata of Late Pleistocene age.
				Undivided Quaternary faults - most faults in this category show evidence of displacement during the last 1,600,000 years; possible exceptions are faults which displace rocks of undifferentiated Plio-Pleistocene age.	Fault cuts strata of Quaternary age.
Pre-Quaternary	1,600,000			Faults without recognized Quaternary displacement or showing evidence of no displacement during Quaternary time. Not necessarily inactive.	Fault cuts strata of Pliocene or older age.
	4.5 billion (Age of Earth)				

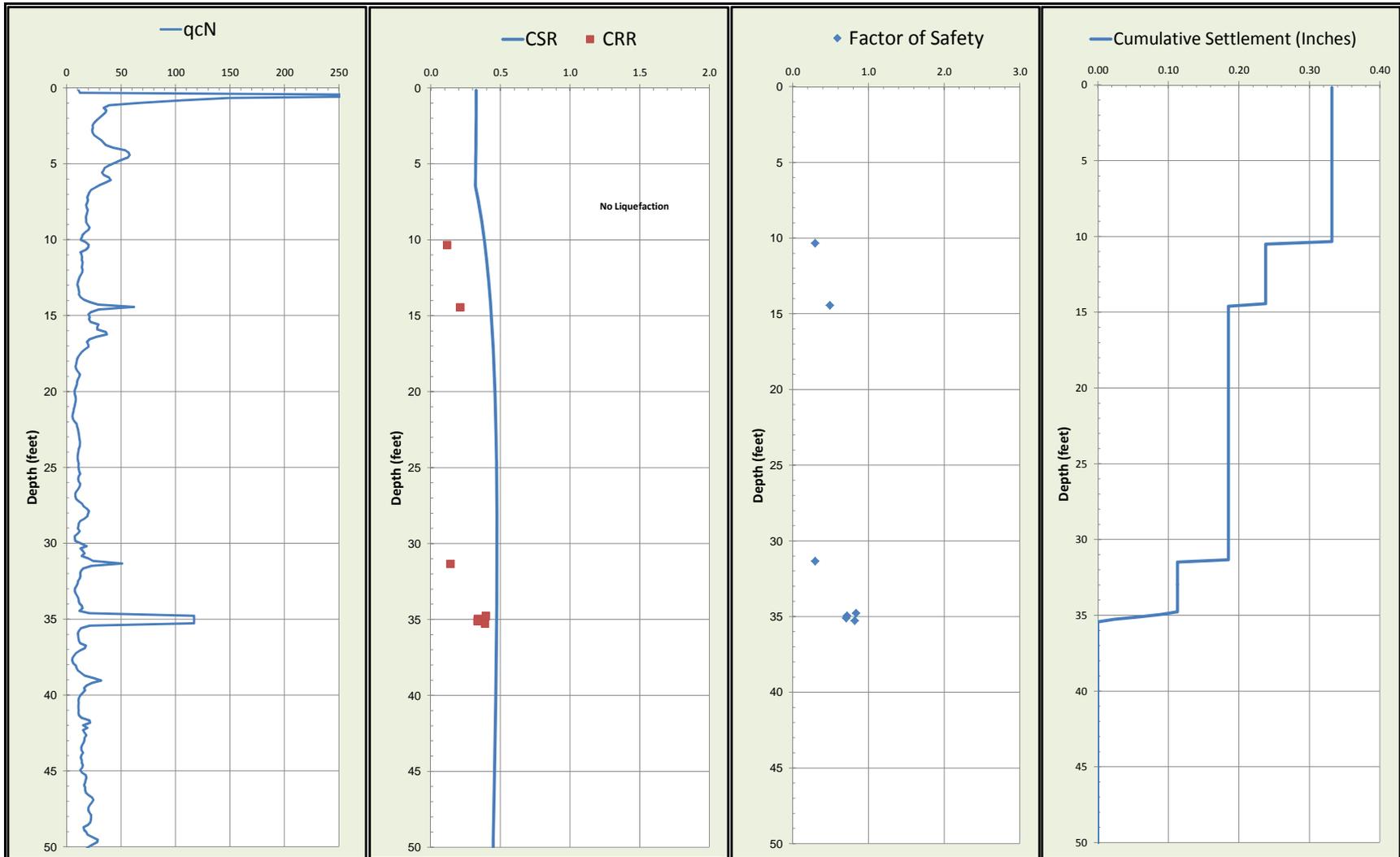
Base by California Geological Survey - 2010 Fault Activity Map of California (Jennings and Bryant, 2010)



Project Number: 704-1-1  
Figure Number: Figure 3  
Date: March 2014  
Drawn By: RRN

Regional Fault Map  
Skypoint Plaza Hotel/Office  
San Jose, CA





**Liquefaction Analysis Summary**

**Skyport Plaza Hotel/Office  
San Jose, California**

Project Number

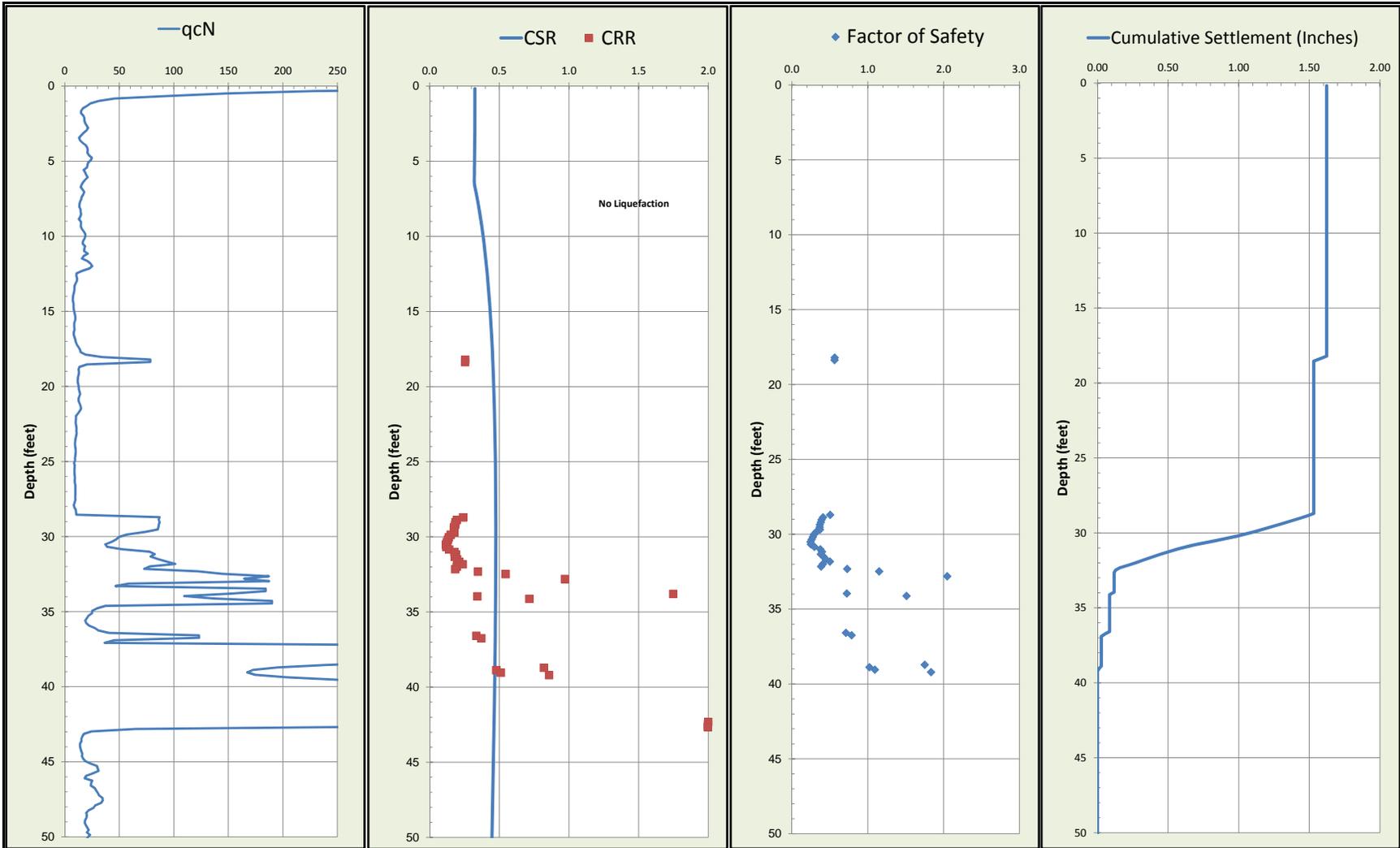
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Figure 4A

3/13/2014

CPT No. 1



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**Liquefaction Analysis Summary**

**Skyport Plaza Hotel/Office  
San Jose, California**

Project Number

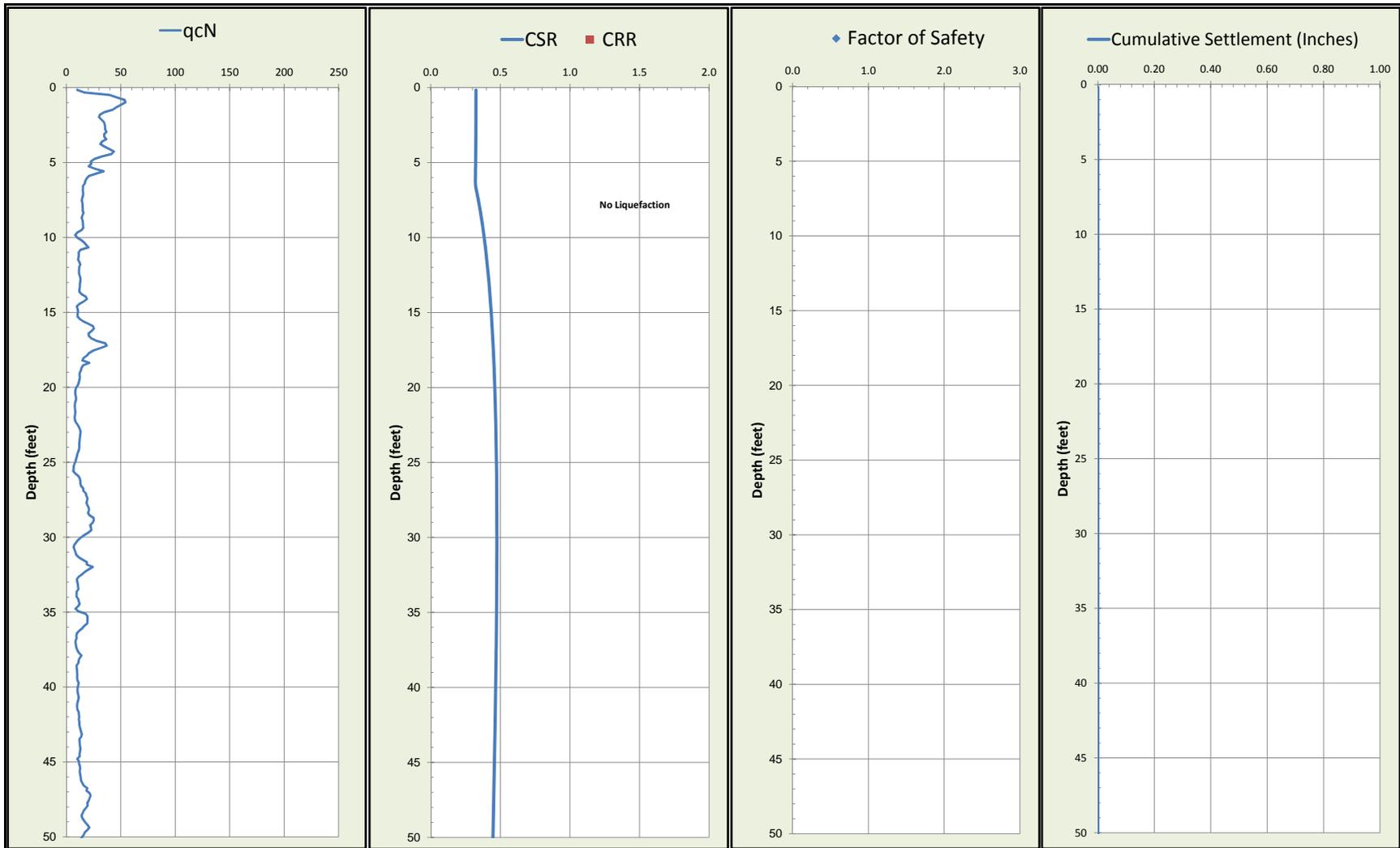
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Figure Number

Figure 4B

3/13/2014

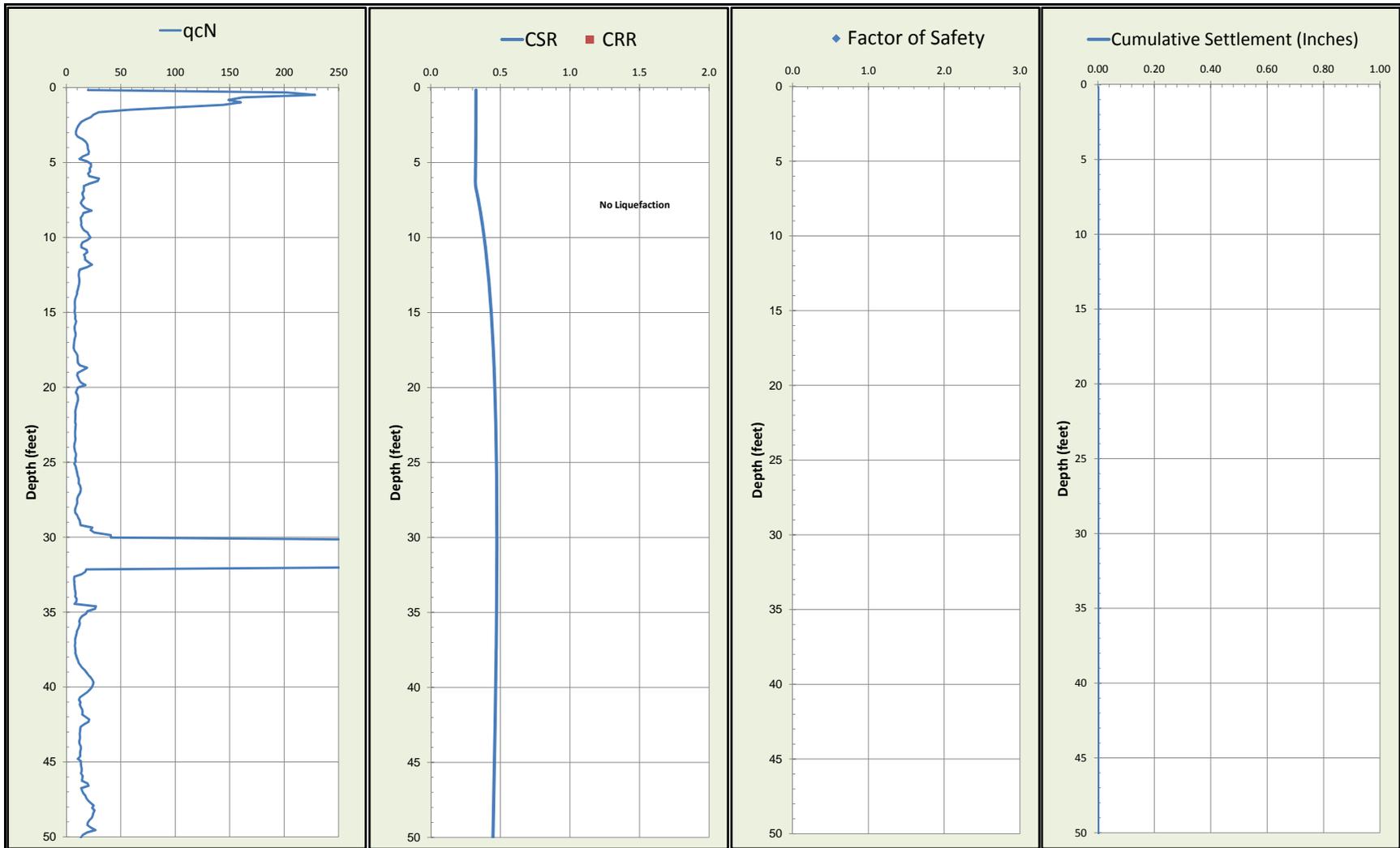
CPT No. 2



**Liquefaction Analysis Summary**

**Skyport Plaza Hotel/Office  
San Jose, California**

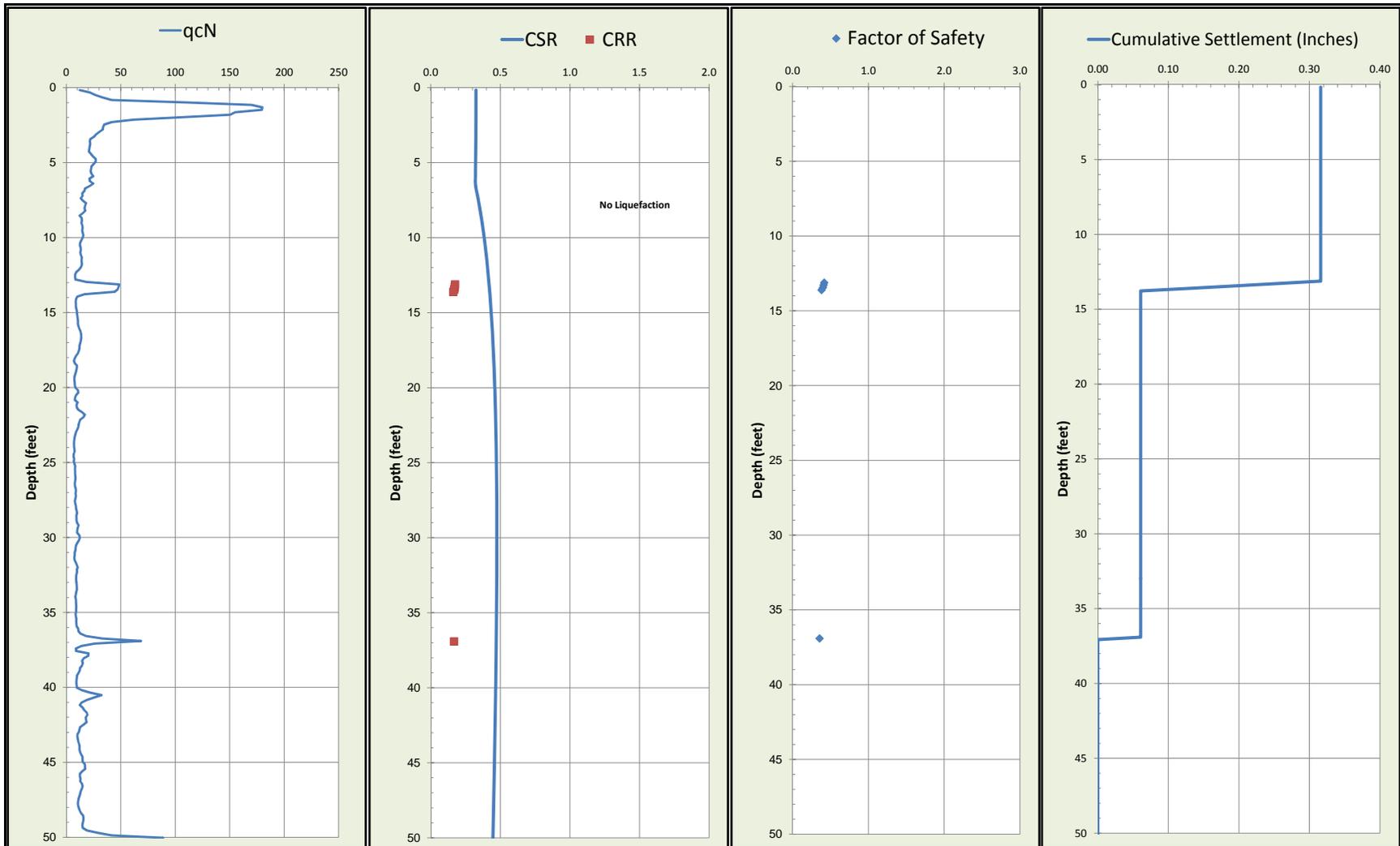
Project Number	704-1-1	
Figure Number	Figure 4C	
3/13/2014	CPT No. 3	



**Liquefaction Analysis Summary**

**Skyport Plaza Hotel/Office  
San Jose, California**

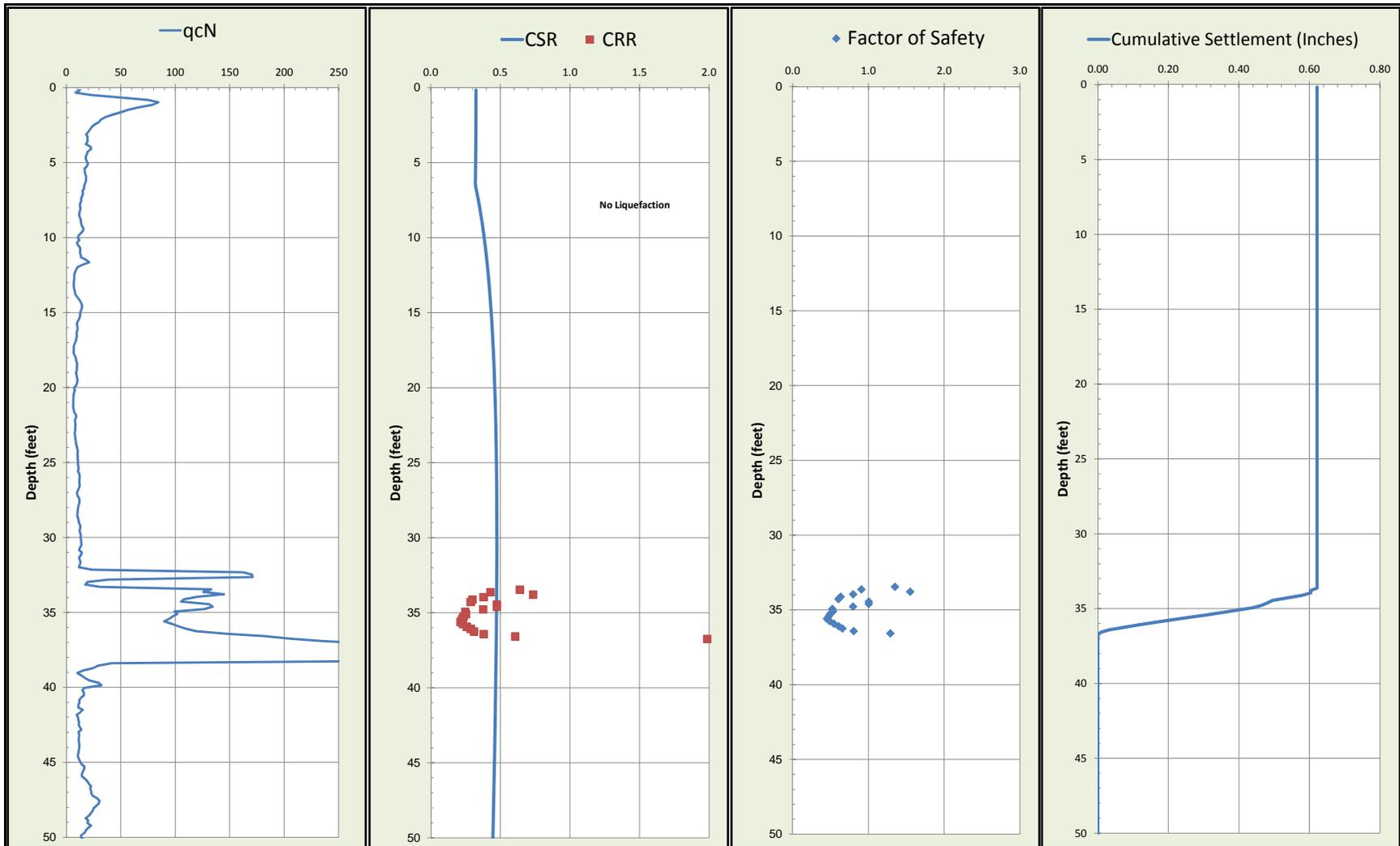
Project Number		704-1-1	
Figure Number		Figure 4D	
3/13/2014		CPT No. 4	



**Liquefaction Analysis Summary**

**Skyport Plaza Hotel/Office  
San Jose, California**

Project Number	704-1-1	
Figure Number	Figure 4E	
3/13/2014	CPT No. 5	



**Liquefaction Analysis Summary**

**Skyport Plaza Hotel/Office  
San Jose, California**

Project Number	704-1-1	
Figure Number	Figure 4F	
3/13/2014	CPT No. 6	

## **APPENDIX A: FIELD INVESTIGATION**

The field investigation consisted of a surface reconnaissance and a subsurface exploration program using truck-mounted, hollow-stem, auger drilling equipment and 20-ton truck-mounted Cone Penetration Test equipment. Three 8-inch-diameter exploratory borings were drilled on February 14 and 18, 2014 to depths of 50 to 70 feet. Six CPT soundings were also performed in accordance with ASTM D 5778-95 (revised, 2002) on February 15 and 19, to depths ranging from 72½ to 99½ feet. The approximate locations of exploratory borings and CPTs are shown on the Site Plan, Figure 2. The soils encountered were continuously logged in the field by our representative and described in accordance with the Unified Soil Classification System (ASTM D2488). Boring logs, as well as a key to the classification of the soil, are included as part of this appendix.

Boring and CPT locations were approximated using existing site boundaries, a hand held GPS unit, and other site features as references. Boring and CPT elevations were not determined. The locations of the borings and CPTs should be considered accurate only to the degree implied by the method used.

Representative soil samples were obtained from the borings at selected depths. All samples were returned to our laboratory for evaluation and appropriate testing. The standard penetration resistance blow counts were obtained by dropping a 140-pound hammer through a 30-inch free fall. The 2-inch O.D. split-spoon sampler was driven 18 inches and the number of blows was recorded for each 6 inches of penetration (ASTM D1586). 2.5-inch I.D. samples were obtained using a Modified California Sampler driven into the soil with the 140-pound hammer previously described. Unless otherwise indicated, the blows per foot recorded on the boring log represent the accumulated number of blows required to drive the last 12 inches. The various samplers are denoted at the appropriate depth on the boring logs.

The CPT involved advancing an instrumented cone-tipped probe into the ground while simultaneously recording the resistance at the cone tip ( $q_c$ ) and along the friction sleeve ( $f_s$ ) at approximately 5-centimeter intervals. Based on the tip resistance and tip to sleeve ratio ( $R_f$ ), the CPT classified the soil behavior type and estimated engineering properties of the soil, such as equivalent Standard Penetration Test (SPT) blow count, internal friction angle within sand layers, and undrained shear strength in silts and clays. A pressure transducer behind the tip of the CPT cone measured pore water pressure ( $u_2$ ). Graphical logs of the CPT data is included as part of this appendix.

Field tests included an evaluation of the unconfined compressive strength of the soil samples using a pocket penetrometer device. The results of these tests are presented on the individual boring logs at the appropriate sample depths.

Attached boring and CPT logs and related information depict subsurface conditions at the locations indicated and on the date designated on the logs. Subsurface conditions at other locations may differ from conditions occurring at these boring and CPT locations. The passage of time may result in altered subsurface conditions due to environmental changes. In addition, any stratification lines on the logs represent the approximate boundary between soil types and the transition may be gradual.

# UNIFIED SOIL CLASSIFICATION (ASTM D-2487-10)

MATERIAL TYPES	CRITERIA FOR ASSIGNING SOIL GROUP NAMES			GROUP SYMBOL	SOIL GROUP NAMES & LEGEND		
COARSE-GRAINED SOILS >50% RETAINED ON NO. 200 SIEVE	GRAVELS  >50% OF COARSE FRACTION RETAINED ON NO 4. SIEVE	CLEAN GRAVELS <5% FINES	$Cu > 4$ AND $1 < Cc < 3$	GW	WELL-GRADED GRAVEL		
			$Cu > 4$ AND $1 > Cc > 3$	GP	POORLY-GRADED GRAVEL		
		GRAVELS WITH FINES >12% FINES	FINES CLASSIFY AS ML OR CL	GM	SILTY GRAVEL		
			FINES CLASSIFY AS CL OR CH	GC	CLAYEY GRAVEL		
	SANDS  >50% OF COARSE FRACTION PASSES ON NO 4. SIEVE	CLEAN SANDS <5% FINES	$Cu > 6$ AND $1 < Cc < 3$	SW	WELL-GRADED SAND		
			$Cu > 6$ AND $1 > Cc > 3$	SP	POORLY-GRADED SAND		
		SANDS AND FINES >12% FINES	FINES CLASSIFY AS ML OR CL	SM	SILTY SAND		
			FINES CLASSIFY AS CL OR CH	SC	CLAYEY SAND		
FINE-GRAINED SOILS >50% PASSES NO. 200 SIEVE	SILTS AND CLAYS  LIQUID LIMIT < 50	INORGANIC	$PI > 7$ AND PLOTS > "A" LINE	CL	LEAN CLAY		
			$PI > 4$ AND PLOTS < "A" LINE	ML	SILT		
		ORGANIC	$LL$ (oven dried)/ $LL$ (not dried) < 0.75		OL	ORGANIC CLAY OR SILT	
			SILTS AND CLAYS  LIQUID LIMIT > 50	INORGANIC	$PI$ PLOTS > "A" LINE	CH	FAT CLAY
	$PI$ PLOTS < "A" LINE	MH			ELASTIC SILT		
	ORGANIC	$LL$ (oven dried)/ $LL$ (not dried) < 0.75		OH	ORGANIC CLAY OR SILT		
		HIGHLY ORGANIC SOILS			PT	PEAT	
				PRIMARILY ORGANIC MATTER, DARK IN COLOR, AND ORGANIC ODOR			

OTHER MATERIAL SYMBOLS	
	Poorly-Graded Sand with Clay
	Clayey Sand
	Sandy Silt
	Artificial/Undocumented Fill
	Poorly-Graded Gravelly Sand
	Topsoil
	Well-Graded Gravel with Clay
	Well-Graded Gravel with Silt
	Sand
	Silt
	Well Graded Gravelly Sand
	Gravelly Silt
	Asphalt
	Boulders and Cobble

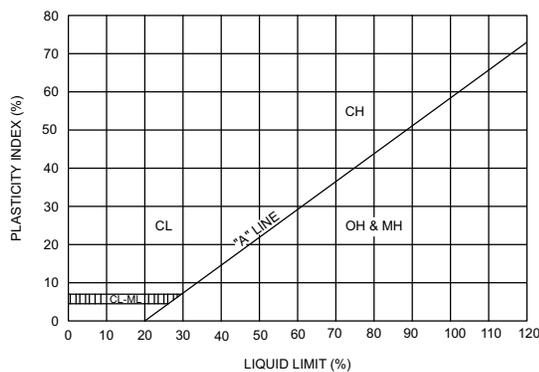
### SAMPLER TYPES

	SPT		Shelby Tube
	Modified California (2.5" I.D.)		No Recovery
	Rock Core		Grab Sample

### ADDITIONAL TESTS

CA - CHEMICAL ANALYSIS (CORROSIVITY)	PI - PLASTICITY INDEX
CD - CONSOLIDATED DRAINED TRIAXIAL	SW - SWELL TEST
CN - CONSOLIDATION	TC - CYCLIC TRIAXIAL
CU - CONSOLIDATED UNDRAINED TRIAXIAL	TV - TORVANE SHEAR
DS - DIRECT SHEAR	UC - UNCONFINED COMPRESSION
PP - POCKET PENETROMETER (TSF)	(1.5) - (WITH SHEAR STRENGTH IN KSF)
(3.0) - (WITH SHEAR STRENGTH IN KSF)	-
RV - R-VALUE	UU - UNCONSOLIDATED UNDRAINED TRIAXIAL
SA - SIEVE ANALYSIS: % PASSING #200 SIEVE	
	- WATER LEVEL

### PLASTICITY CHART



### PENETRATION RESISTANCE (RECORDED AS BLOWS / FOOT)

SAND & GRAVEL		SILT & CLAY		
RELATIVE DENSITY	BLOWS/FOOT*	CONSISTENCY	BLOWS/FOOT*	STRENGTH** (KSF)
VERY LOOSE	0 - 4	VERY SOFT	0 - 2	0 - 0.25
LOOSE	4 - 10	SOFT	2 - 4	0.25 - 0.5
MEDIUM DENSE	10 - 30	MEDIUM STIFF	4 - 8	0.5 - 1.0
DENSE	30 - 50	STIFF	8 - 15	1.0 - 2.0
VERY DENSE	OVER 50	VERY STIFF	15 - 30	2.0 - 4.0
		HARD	OVER 30	OVER 4.0

\* NUMBER OF BLOWS OF 140 LB HAMMER FALLING 30 INCHES TO DRIVE A 2 INCH O.D. (1-3/8 INCH I.D.) SPLIT-BARREL SAMPLER THE LAST 12 INCHES OF AN 18-INCH DRIVE (ASTM-1586 STANDARD PENETRATION TEST).

\*\* UNDRAINED SHEAR STRENGTH IN KIPS/SQ. FT. AS DETERMINED BY LABORATORY TESTING OR APPROXIMATED BY THE STANDARD PENETRATION TEST, POCKET PENETROMETER, TORVANE, OR VISUAL OBSERVATION.

**PROJECT NAME** Skyport Plaza Hotel / Office  
**PROJECT NUMBER** 704-1-1  
**PROJECT LOCATION** San Jose, CA  
**DATE STARTED** 2/18/14 **DATE COMPLETED** 2/18/14  
**GROUND ELEVATION** \_\_\_\_\_ **BORING DEPTH** 50 ft.  
**DRILLING CONTRACTOR** Exploration Geoservices, Inc.  
**LATITUDE** \_\_\_\_\_ **LONGITUDE** \_\_\_\_\_  
**DRILLING METHOD** Mobile B-40, 8 inch Hollow-Stem Auger  
**GROUND WATER LEVELS:**  
**LOGGED BY** PKM  
**NOTES** \_\_\_\_\_  
 ▽ **AT TIME OF DRILLING** Not Encountered  
 ▼ **AT END OF DRILLING** Not Encountered

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ELEVATION (ft)	DEPTH (ft)	SYMBOL	DESCRIPTION	N-Value (uncorrected) blows per foot	SAMPLES TYPE AND NUMBER	DRY UNIT WEIGHT PCF	NATURAL MOISTURE CONTENT, %	PLASTICITY INDEX, %	PERCENT PASSING No. 200 SIEVE	UNDRAINED SHEAR STRENGTH, ksf
	0		<b>Lean Clay with Sand (CL) [Fill]</b> hard, moist, dark brown and brown mottled, fine to medium sand, moderate plasticity	36	MC-1B	121	12			○ >4.5
	2.5		<b>Clayey Sand with Gravel (SC) [Fill]</b> medium dense, moist, brown, fine to coarse sand, some fine subangular to subrounded gravel, low plasticity	24	2A MC 2B	99 116	14 16			▲
	5		<b>Lean Clay with Sand (CL)</b> very stiff, moist, brown, fine to medium sand, moderate plasticity	19	MC-3B	111	19			○
	8		<b>Fat Clay (CH)</b> very stiff, moist, gray with olive brown mottles, some fine sand, high plasticity	13	MC-4B	88	33			○
	13			13	MC-5B	79	42			○
	18			15	MC-6B	89	30			○
	23			18	MC-7B	86	34			○
	28			25	MC-8B	98	27			○
	30									

Continued Next Page



PROJECT NAME Skyport Plaza Hotel / Office

PROJECT NUMBER 704-1-1

PROJECT LOCATION San Jose, CA

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ELEVATION (ft)	DEPTH (ft)	SYMBOL	DESCRIPTION	N-Value (uncorrected) blows per foot	SAMPLES TYPE AND NUMBER	DRY UNIT WEIGHT PCF	NATURAL MOISTURE CONTENT, %	PLASTICITY INDEX, %	PERCENT PASSING No. 200 SIEVE	UNDRAINED SHEAR STRENGTH, ksf								
										○ HAND PENETROMETER	△ TORVANE	● UNCONFINED COMPRESSION	▲ UNCONSOLIDATED-UNDRAINED TRIAXIAL	1.0	2.0	3.0	4.0	
	30		<b>Sandy Silty Clay (CL-ML)</b> stiff, moist, gray brown, fine sand, low plasticity															
			Liquid Limit = 26, Plastic Limit = 19	15	MC-9B	98	24	7	57	○								
	35		<b>Lean Clay (CL)</b> stiff, moist, gray, some fine sand, moderate plasticity															
				12	SPT-10		25			○								
	40		<b>Sandy Silty Clay (CL-ML)</b> stiff, moist, brown, fine sand, low plasticity															
				16	MC-11B	99	26			○								
	45		<b>Lean Clay (CL)</b> very stiff, moist, gray with olive brown mottles, some fine sand, moderate plasticity															
				14	MC-12B	103	25			○								
	50		Bottom of Boring at 50.0 feet.															
	55																	
	60																	

CORNERSTONE EARTH GROUP2 - CORNERSTONE 0812.GDT - 3/14/14 09:56 - P:\DRAFTING\GINT FILES\704-1-1 SKYPORT HOTEL OFFICE SITE.GPJ

PROJECT NAME Skyport Plaza Hotel / Office

PROJECT NUMBER 704-1-1

PROJECT LOCATION San Jose, CA

DATE STARTED 2/14/14 DATE COMPLETED 2/14/14

GROUND ELEVATION \_\_\_\_\_ BORING DEPTH 70 ft.

DRILLING CONTRACTOR Exploration Geoservices, Inc.

LATITUDE \_\_\_\_\_ LONGITUDE \_\_\_\_\_

DRILLING METHOD Mobile B-61, 8 inch Hollow-Stem Auger

GROUND WATER LEVELS:

LOGGED BY PKM

▽ AT TIME OF DRILLING 15 ft.

NOTES \_\_\_\_\_

▼ AT END OF DRILLING 15 ft.

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ELEVATION (ft)	DEPTH (ft)	SYMBOL	DESCRIPTION	N-Value (uncorrected) blows per foot	SAMPLES TYPE AND NUMBER	DRY UNIT WEIGHT PCF	NATURAL MOISTURE CONTENT, %	PLASTICITY INDEX, %	PERCENT PASSING No. 200 SIEVE	UNDRAINED SHEAR STRENGTH, ksf
	0		<b>Sandy Lean Clay (CL) [Fill]</b> hard, moist, brown with dark brown mottles, fine to coarse sand, moderate plasticity Liquid Limit = 35, Plastic Limit = 19	37	MC-1B	111	15	16		
	5		<b>Lean Clay (CL)</b> very, moist, brown, some fine sand, some silt, low plasticity	22	MC					
	6		<b>Silty Sand (SM)</b> medium dense, moist, brown, fine sand	21	MC-3A		22		88	
	10		<b>Fat Clay (CH)</b> very stiff, moist, gray with brown mottles, some fine sand, high plasticity	24	MC-4B	88	32			
	15		<b>Lean Clay (CL)</b> very stiff, moist, gray with olive brown mottles, some fine sand, moderate plasticity	22	MC-5A	78	40			
	20			20	6A MC 6B	93 94	30 29			
	25		<b>Fat Clay (CH)</b> medium stiff, moist, gray with dark gray mottles, trace fine sand, high plasticity	16	7A MC 7B	75 72	44 50			

Continued Next Page



PROJECT NAME Skyport Plaza Hotel / Office

PROJECT NUMBER 704-1-1

PROJECT LOCATION San Jose, CA

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ELEVATION (ft)	DEPTH (ft)	SYMBOL	DESCRIPTION	N-Value (uncorrected) blows per foot	SAMPLES TYPE AND NUMBER	DRY UNIT WEIGHT PCF	NATURAL MOISTURE CONTENT, %	PLASTICITY INDEX, %	PERCENT PASSING No. 200 SIEVE	UNDRAINED SHEAR STRENGTH, ksf								
										○ HAND PENETROMETER	△ TORVANE	● UNCONFINED COMPRESSION	▲ UNCONSOLIDATED-UNDRAINED TRIAXIAL	1.0	2.0	3.0	4.0	
			<b>Sandy Lean Clay (CL)</b> stiff, moist, brown, fine to medium sand, low plasticity															
	30		<b>Clayey Sand (SC)</b> medium dense, moist, brown, fine to medium sand Liquid Limit = 26, Plastic Limit = 17	19	8A MC 8B	106	22		45									
			<b>Lean Clay with Sand (CL)</b> medium stiff, moist, olive gray with reddish brown mottles, fine to medium sand, moderate plasticity	16	SPT-9B		28											
	35		<b>Sandy Lean Clay (CL)</b> soft, moist, brown with gray mottles, fine to medium sand, low plasticity	22	MC-10B	89	30											
	40			20	11A MC 11B	93	27											
			<b>Lean Clay with Sand (CL)</b> medium stiff, moist, gray with olive brown mottles, fine sand, moderate plasticity			97	27											
	45			20	MC-12A	100	25											
	50		becomes very stiff	32	MC-13B	104	23											
	55		<b>Sandy Lean Clay (CL)</b> medium stiff, moist, gray with brown mottles, fine to medium sand, low plasticity	25	MC	100	19		53									
			Continued Next Page															

CORNERSTONE EARTH GROUP2 - CORNERSTONE 0812.GDT - 3/14/14 09:56 - P:\DRAFTING\GINT FILES\704-1-1 SKYPORT HOTEL OFFICE SITE.GPJ



PROJECT NAME Skyport Plaza Hotel / Office

PROJECT NUMBER 704-1-1

PROJECT LOCATION San Jose, CA

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ELEVATION (ft)	DEPTH (ft)	SYMBOL	DESCRIPTION	N-Value (uncorrected) blows per foot	SAMPLES TYPE AND NUMBER	DRY UNIT WEIGHT PCF	NATURAL MOISTURE CONTENT, %	PLASTICITY INDEX, %	PERCENT PASSING No. 200 SIEVE	UNDRAINED SHEAR STRENGTH, ksf								
										○ HAND PENETROMETER	△ TORVANE	● UNCONFINED COMPRESSION	▲ UNCONSOLIDATED-UNDRAINED TRIAXIAL	1.0	2.0	3.0	4.0	
			<b>Silty Sand (SM)</b> medium dense, moist, gray and olive brown mottled, fine sand															
	60		<b>Lean Clay (CL)</b> stiff, moist, brown with gray mottles, some fine, moderate plasticity	21	SPT													
	65			25	MC-16B	104	22			○								
	70		becomes gray with brown mottles	29	MC-17B	104	23			○	▲							
			Bottom of Boring at 70.0 feet.															

PROJECT NAME Skyport Plaza Hotel / Office

PROJECT NUMBER 704-1-1

PROJECT LOCATION San Jose, CA

DATE STARTED 2/14/14 DATE COMPLETED 2/14/14

GROUND ELEVATION \_\_\_\_\_ BORING DEPTH 60 ft.

DRILLING CONTRACTOR Exploration Geoservices, Inc.

LATITUDE \_\_\_\_\_ LONGITUDE \_\_\_\_\_

DRILLING METHOD Mobile B-61, 8 inch Hollow-Stem Auger

GROUND WATER LEVELS:

LOGGED BY PKM

▽ AT TIME OF DRILLING 15 ft.

NOTES \_\_\_\_\_

▼ AT END OF DRILLING 15 ft.

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ELEVATION (ft)	DEPTH (ft)	SYMBOL	DESCRIPTION	N-Value (uncorrected) blows per foot	SAMPLES TYPE AND NUMBER	DRY UNIT WEIGHT PCF	NATURAL MOISTURE CONTENT, %	PLASTICITY INDEX, %	PERCENT PASSING No. 200 SIEVE	UNDRAINED SHEAR STRENGTH, ksf
	0		<b>Sandy Lean Clay with Gravel (CL) [Fill]</b> hard, moist, brown, fine to coarse sand, fine to coarsesubangular to subrounded gravel, low plasticity	33	MC-1B	106	15			○ >4.5
	5		<b>Lean Clay (CL)</b> hard, moist, dark brown, some fine sand, moderate plasticity	31	2A MC 2B	103 105	22 21			○ >4.5 ▲
	5		<b>Lean Clay with Sand (CL)</b> hard, moist, brown, fine to medium sand, low plasticity	33	MC-3B	103	20		81	○ >4.5
	10		<b>Lean Clay (CL)</b> very stiff, moist, gray with olive brown mottles, some fine sand, moderate plasticity	21	MC-4B	90	31			○
	15		<b>Fat Clay (CH)</b> stiff, moist, gray brown, some fine sand, high plasticity	20	MC-5B	76	44			○
	20			19	6A MC 6B	91 88	32 33			▲ ○
	25			21	MC-7B	82	40			○
	30		<b>Lean Clay (CL)</b> stiff, moist, gray with olive brown mottles, some fine sand, moderate plasticity	23	MC-8B	97	26			○

Continued Next Page

PROJECT NAME Skyport Plaza Hotel / Office

 PROJECT NUMBER 704-1-1

 PROJECT LOCATION San Jose, CA

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UNDRAINED SHEAR STRENGTH, ksf

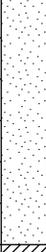
○ HAND PENETROMETER

△ TORVANE

● UNCONFINED COMPRESSION

▲ UNCONSOLIDATED-UNDRAINED TRIAXIAL

1.0 2.0 3.0 4.0

ELEVATION (ft)	DEPTH (ft)	SYMBOL	DESCRIPTION	N-Value (uncorrected) blows per foot	SAMPLES TYPE AND NUMBER	DRY UNIT WEIGHT PCF	NATURAL MOISTURE CONTENT, %	PLASTICITY INDEX, %	PERCENT PASSING No. 200 SIEVE	UNDRAINED SHEAR STRENGTH, ksf
	30		<b>Lean Clay (CL)</b> stiff, moist, gray with olive brown mottles, some fine sand, moderate plasticity							
	35		<b>Sandy Silty Clay (CL-ML)</b> stiff, moist, gray brown, fine sand, low plasticity	25	MC-9A	94	27			○
	40		<b>Poorly Graded Sand (SP)</b> medium dense, wet, gray and brown, fine to medium sand	23	SPT-10		26		3	
	45		<b>Lean Clay (CL)</b> stiff, moist, gray with olive brown mottles, some fine sand, moderate plasticity	21	MC-11B	91	31			○
	50			34	MC-12A	103	23			○
	55		becomes medium stiff	23	13A MC 13B	98 101	26 25			○
	60		<b>Silty Sand (SM)</b> medium dense, moist, gray with olive brown mottles, fine sand	28	MC-14B	94	26			▲
	60.0		Bottom of Boring at 60.0 feet.							



# Cornerstone Earth Group

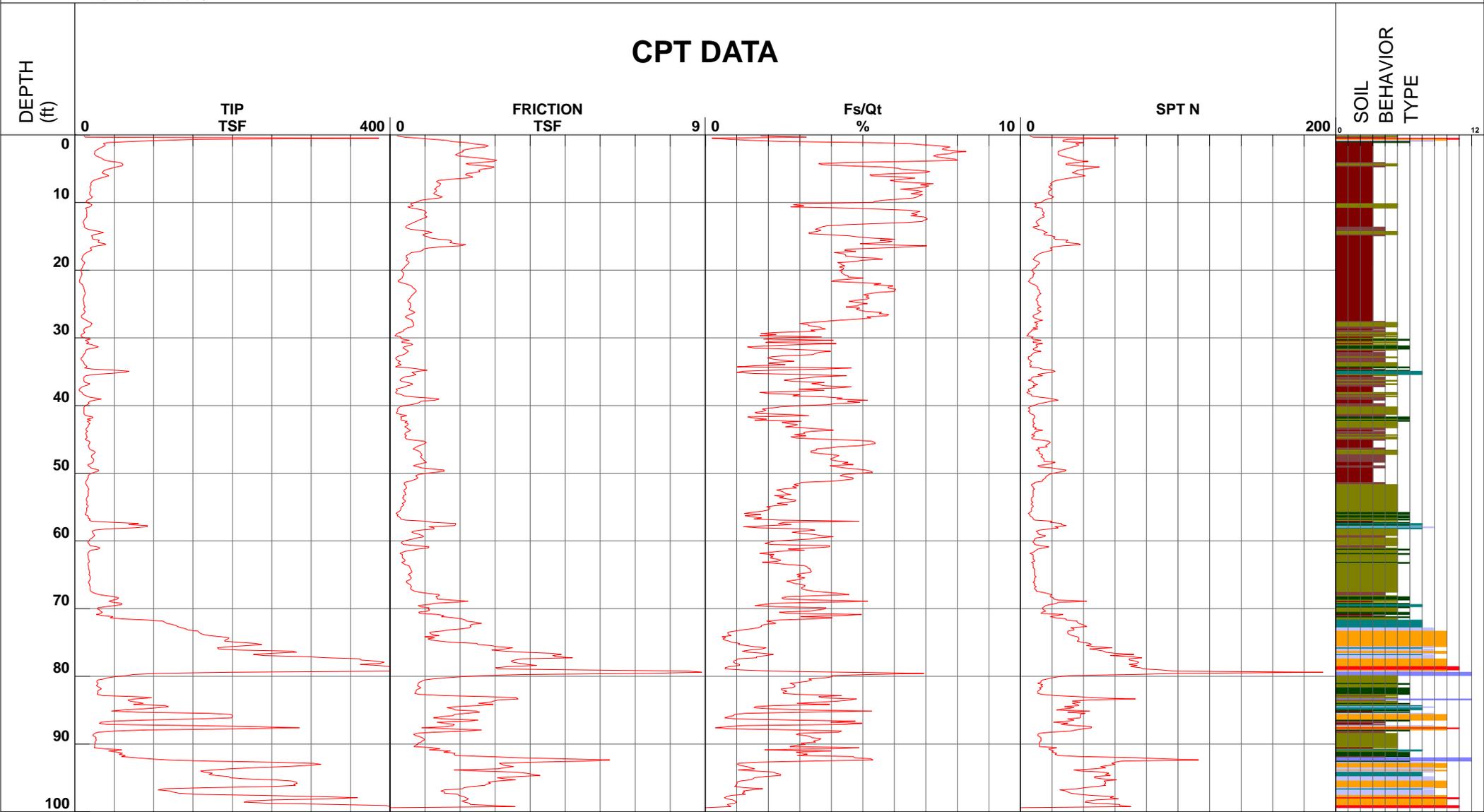
Project Skyport Plaza Hotel/Office  
 Job Number P4289  
 Hole Number CPT-01  
 EST GW Depth During Test

Operator CB/BH  
 Cone Number DDG1268  
 Date and Time 2/15/2014 10:19:22 AM  
 6.00 ft

Filename SDF(016).cpt  
 GPS  
 Maximum Depth 99.57 ft

Net Area Ratio .8

## CPT DATA



- |                              |                                 |                                |                                    |
|------------------------------|---------------------------------|--------------------------------|------------------------------------|
| ■ 1 - sensitive fine grained | ■ 4 - silty clay to clay        | ■ 7 - silty sand to sandy silt | ■ 10 - gravelly sand to sand       |
| ■ 2 - organic material       | ■ 5 - clayey silt to silty clay | ■ 8 - sand to silty sand       | ■ 11 - very stiff fine grained (*) |
| ■ 3 - clay                   | ■ 6 - sandy silt to clayey silt | ■ 9 - sand                     | ■ 12 - sand to clayey sand (*)     |

Cone Size 10cm squared

S\*Soil behavior type and SPT based on data from UBC-1983



# Cornerstone Earth Group

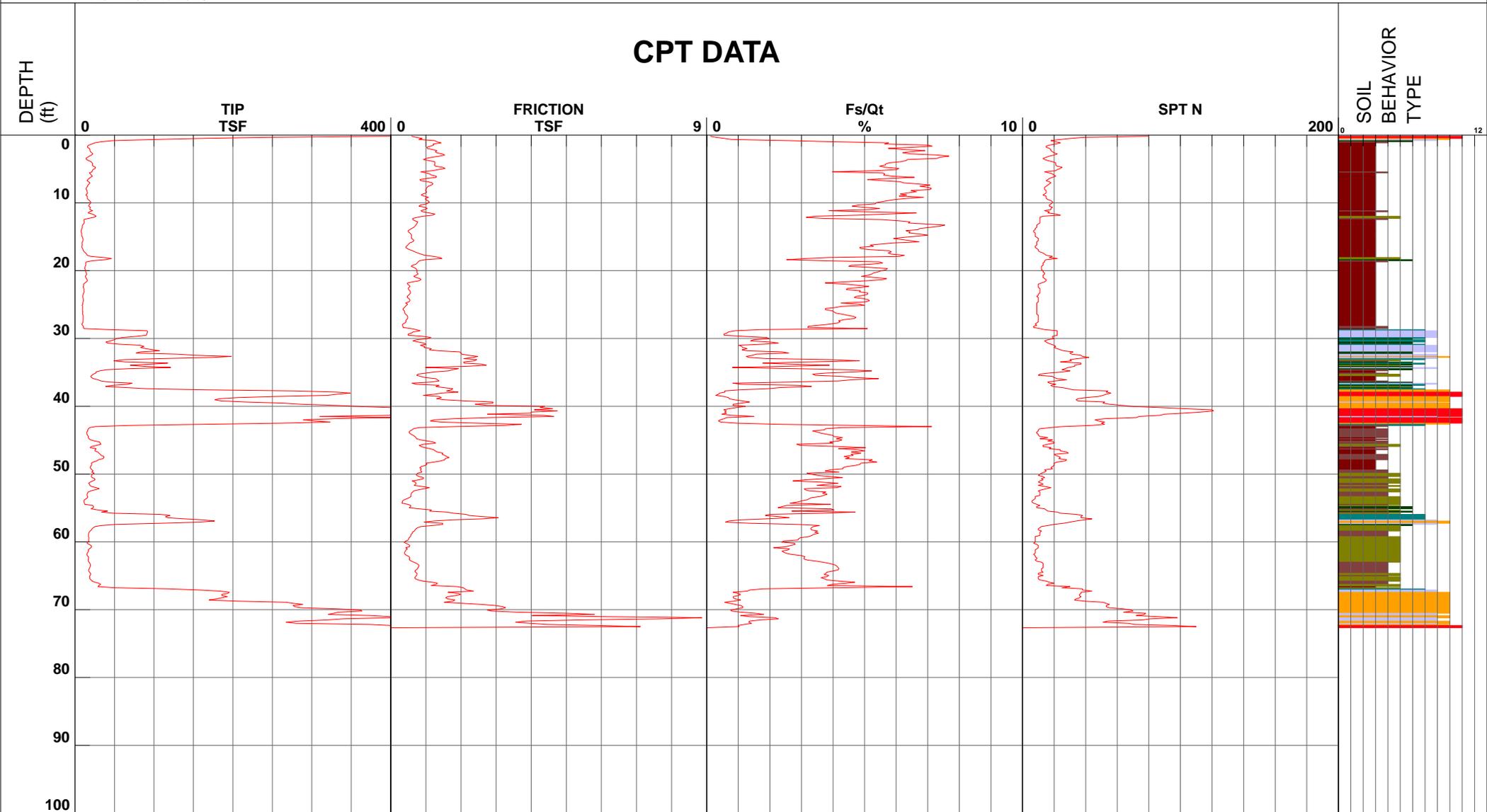
Project Skyport Plaza Hotel/Office  
 Job Number P4289  
 Hole Number CPT-02  
 EST GW Depth During Test

Operator CB/BH  
 Cone Number DDG1268  
 Date and Time 2/15/2014 12:18:42 PM  
 6.00 ft

Filename SDF(018).cpt  
 GPS  
 Maximum Depth 72.83 ft

Net Area Ratio .8

## CPT DATA



- |                              |                                 |                                |                                    |
|------------------------------|---------------------------------|--------------------------------|------------------------------------|
| ■ 1 - sensitive fine grained | ■ 4 - silty clay to clay        | ■ 7 - silty sand to sandy silt | ■ 10 - gravelly sand to sand       |
| ■ 2 - organic material       | ■ 5 - clayey silt to silty clay | ■ 8 - sand to silty sand       | ■ 11 - very stiff fine grained (*) |
| ■ 3 - clay                   | ■ 6 - sandy silt to clayey silt | ■ 9 - sand                     | ■ 12 - sand to clayey sand (*)     |

Cone Size 10cm squared

S\*Soil behavior type and SPT based on data from UBC-1983



# Cornerstone Earth Group

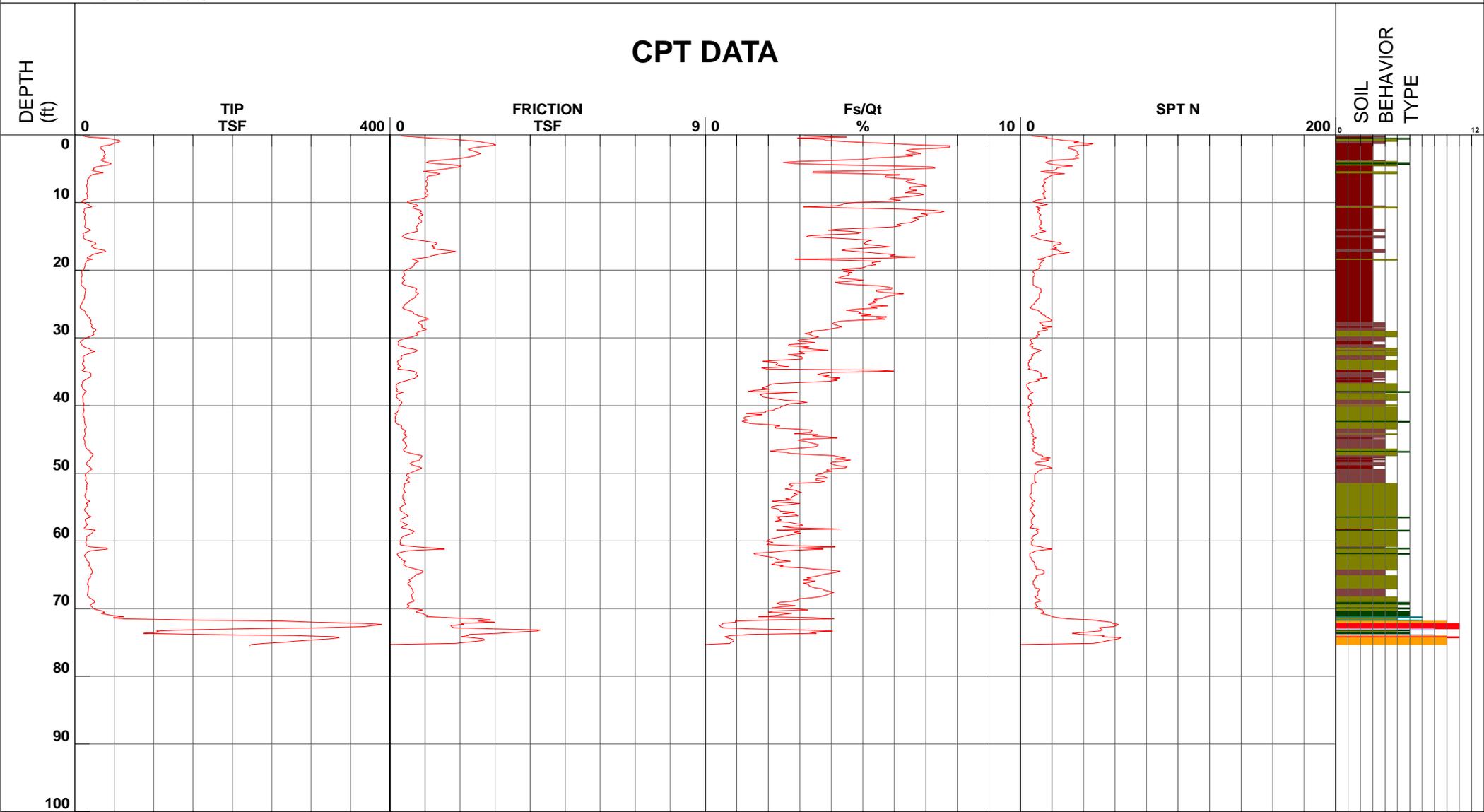
Project Skyport Plaza Hotel/Office  
 Job Number P4289  
 Hole Number CPT-03  
 EST GW Depth During Test

Operator CB/BH  
 Cone Number DDG1268  
 Date and Time 2/15/2014 9:24:06 AM

Filename SDF(015).cpt  
 GPS  
 Maximum Depth 75.46 ft

Net Area Ratio .8

## CPT DATA



- |                            |                               |                              |                                  |
|----------------------------|-------------------------------|------------------------------|----------------------------------|
| 1 - sensitive fine grained | 4 - silty clay to clay        | 7 - silty sand to sandy silt | 10 - gravelly sand to sand       |
| 2 - organic material       | 5 - clayey silt to silty clay | 8 - sand to silty sand       | 11 - very stiff fine grained (*) |
| 3 - clay                   | 6 - sandy silt to clayey silt | 9 - sand                     | 12 - sand to clayey sand (*)     |

Cone Size 10cm squared

S\*Soil behavior type and SPT based on data from UBC-1983

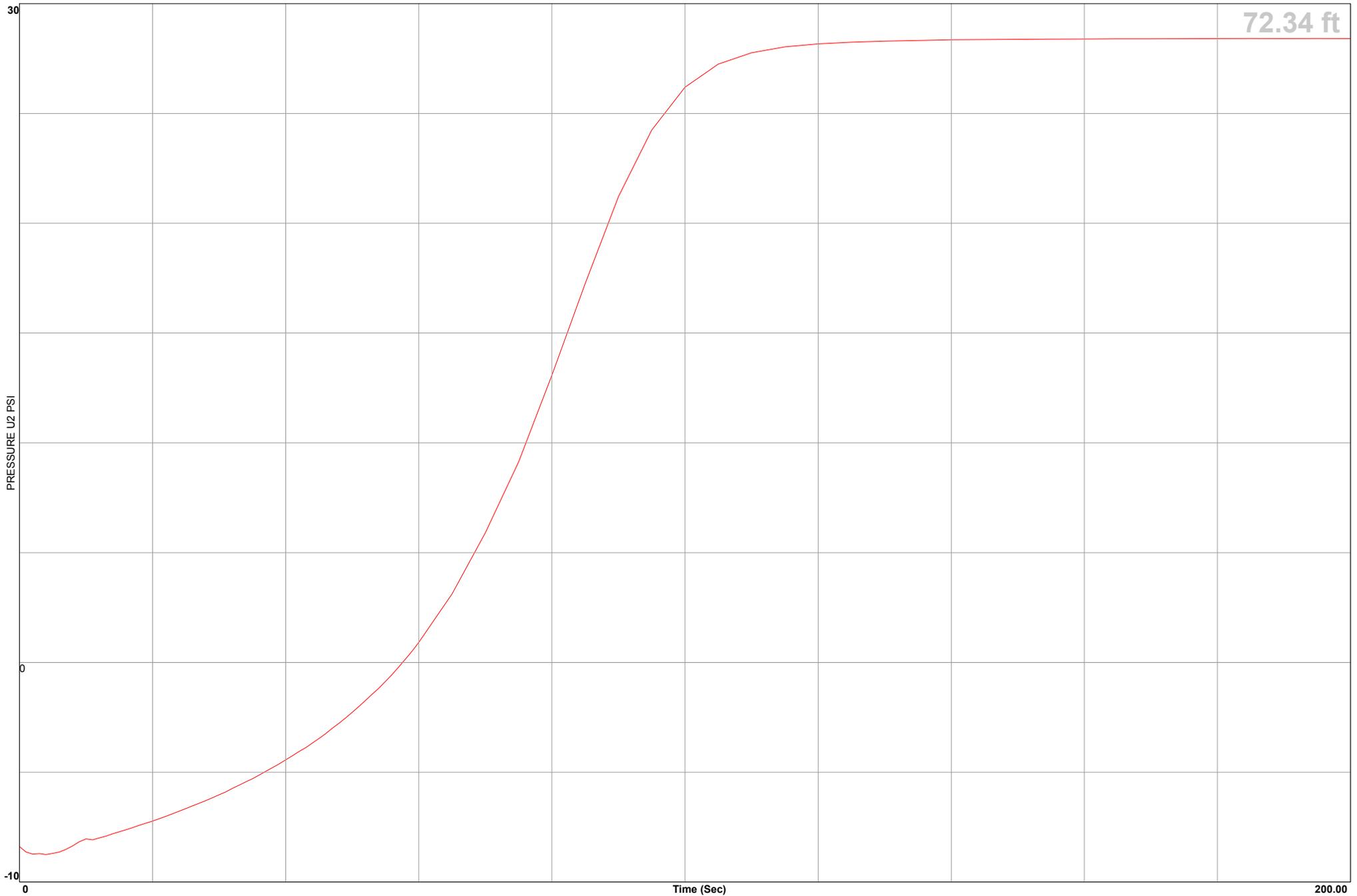


# Cornerstone Earth Group

Location Skyport Plaza Hotel/Office  
Job Number P4289  
Hole Number CPT-03  
Equilized Pressure 28.4

Operator CB/BH  
Cone Number DDG1268  
Date and Time 2/15/2014 9:24:06 AM  
EST GW Depth During Test 6.6

GPS \_\_\_\_\_





# Cornerstone Earth Group

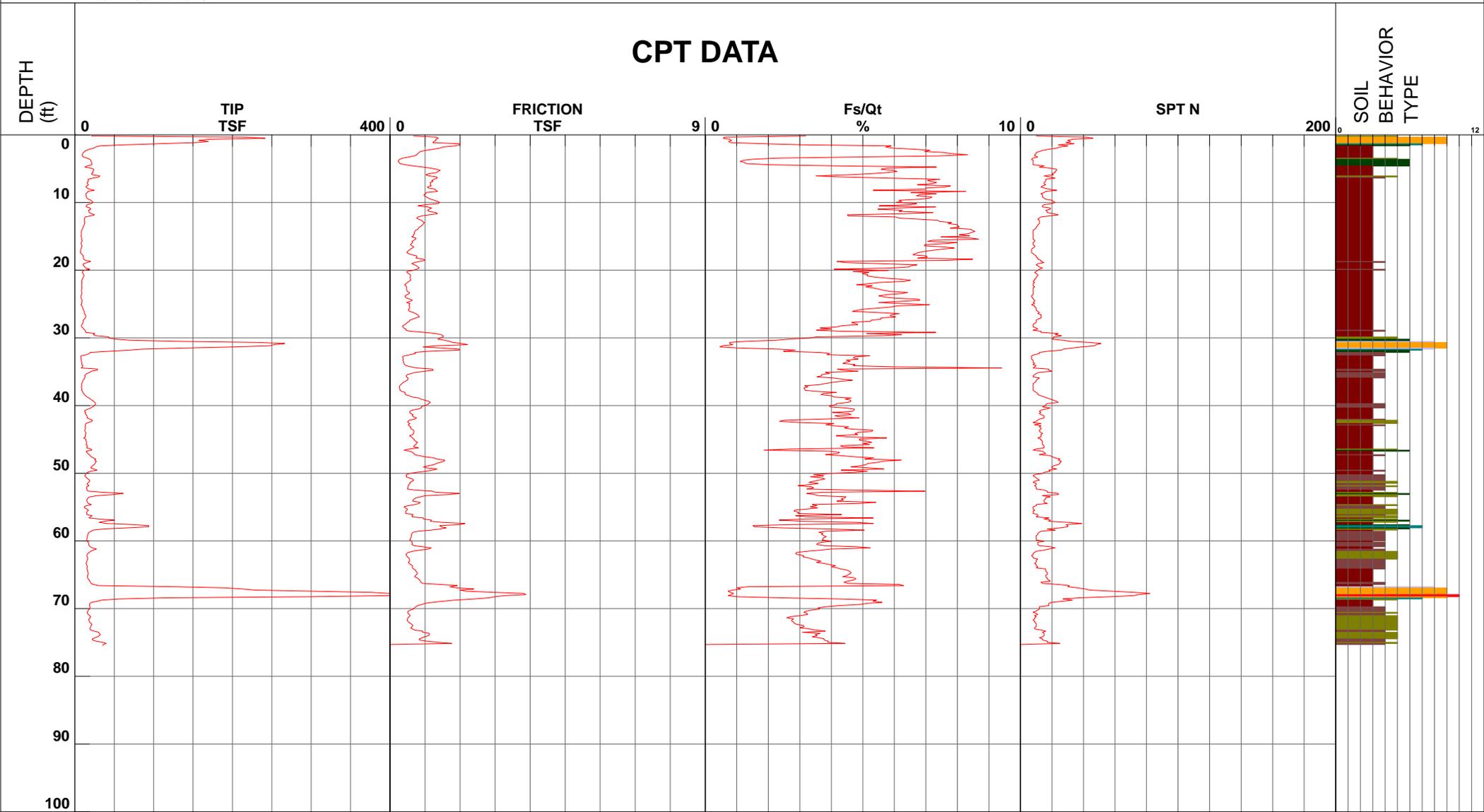
Project Skyport Plaza Hotel/Office  
 Job Number P4289  
 Hole Number CPT-04  
 EST GW Depth During Test

Operator CB/BH  
 Cone Number DDG1268  
 Date and Time 2/15/2014 11:29:44 AM  
 6.00 ft

Filename SDF(017).cpt  
 GPS  
 Maximum Depth 75.46 ft

Net Area Ratio .8

## CPT DATA



- 1 - sensitive fine grained
- 2 - organic material
- 3 - clay

- 4 - silty clay to clay
- 5 - clayey silt to silty clay
- 6 - sandy silt to clayey silt

- 7 - silty sand to sandy silt
- 8 - sand to silty sand
- 9 - sand

- 10 - gravelly sand to sand
- 11 - very stiff fine grained (\*)
- 12 - sand to clayey sand (\*)

Cone Size 10cm squared

S\*Soil behavior type and SPT based on data from UBC-1983



# Cornerstone Earth Group

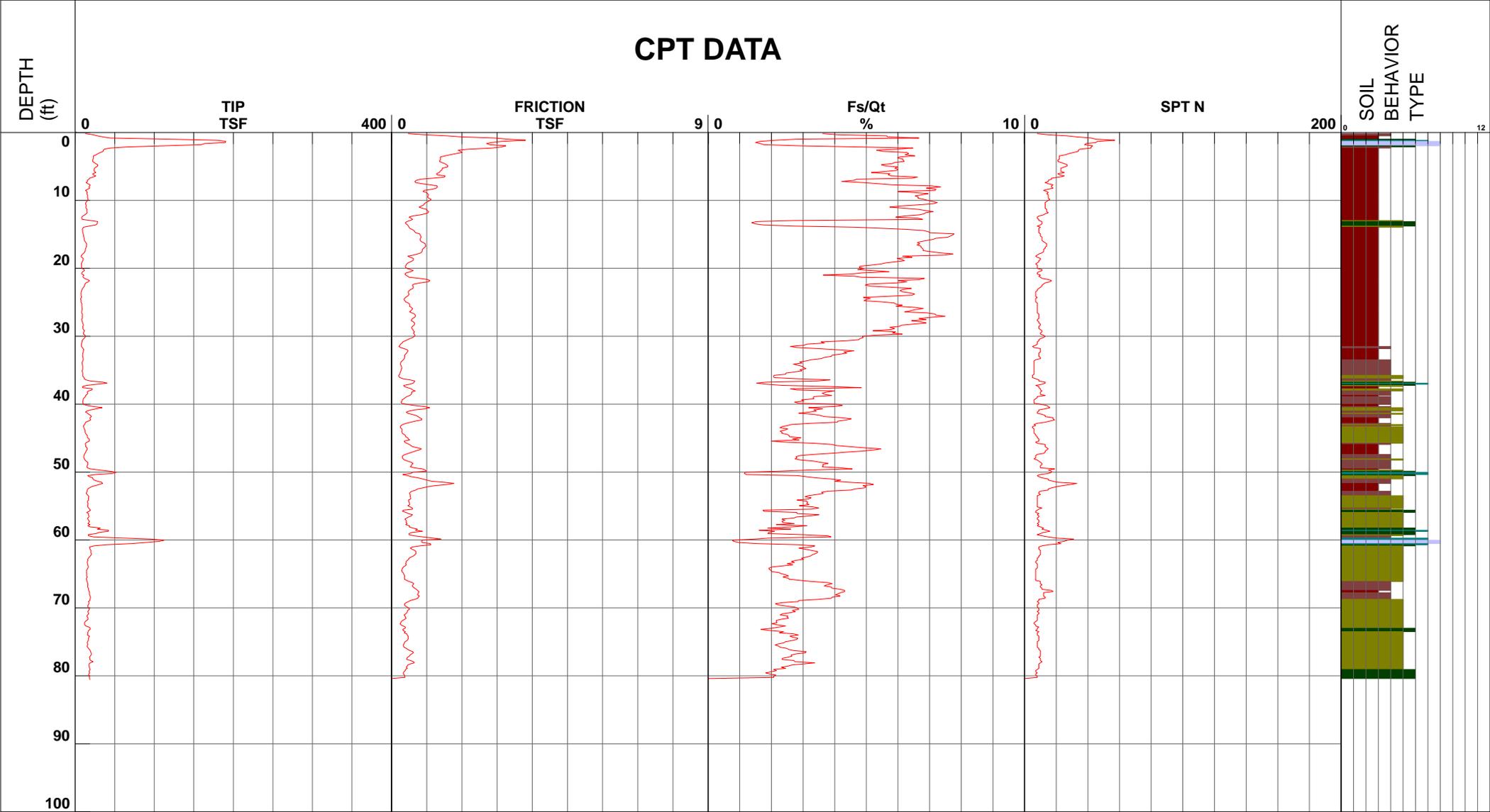
Project Skyport Plaza Hotel/Office  
 Job Number P4289  
 Hole Number CPT-05  
 EST GW Depth During Test

Operator CB/BH  
 Cone Number DDG1268  
 Date and Time 2/15/2014 8:27:51 AM  
 6.00 ft

Filename SDF(014).cpt  
 GPS \_\_\_\_\_  
 Maximum Depth 80.54 ft

Net Area Ratio .8

## CPT DATA



- |                              |                                 |                                |                                    |
|------------------------------|---------------------------------|--------------------------------|------------------------------------|
| ■ 1 - sensitive fine grained | ■ 4 - silty clay to clay        | ■ 7 - silty sand to sandy silt | ■ 10 - gravelly sand to sand       |
| ■ 2 - organic material       | ■ 5 - clayey silt to silty clay | ■ 8 - sand to silty sand       | ■ 11 - very stiff fine grained (*) |
| ■ 3 - clay                   | ■ 6 - sandy silt to clayey silt | ■ 9 - sand                     | ■ 12 - sand to clayey sand (*)     |

Cone Size 10cm squared

S\*Soil behavior type and SPT based on data from UBC-1983



# Cornerstone Earth Group

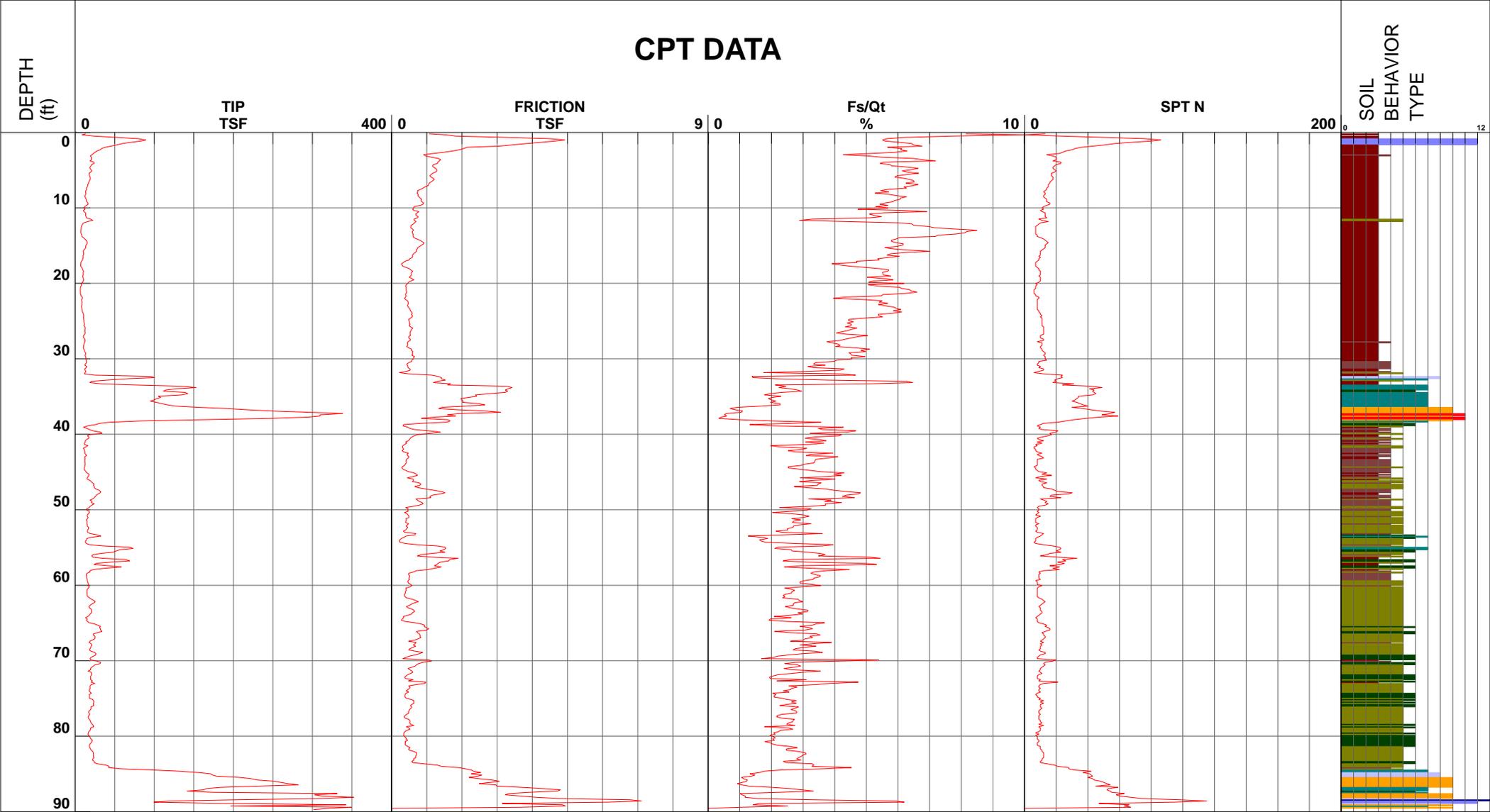
Project Skyport Plaza/Hotel  
 Job Number 704-1-1  
 Hole Number CPT-06  
 EST GW Depth During Test

Operator CB/TR  
 Cone Number DDG1268  
 Date and Time 2/19/2014 7:41:57 AM  
 6.00 ft

Filename SDF(033).cpt  
 GPS  
 Maximum Depth 89.73 ft

Net Area Ratio .8

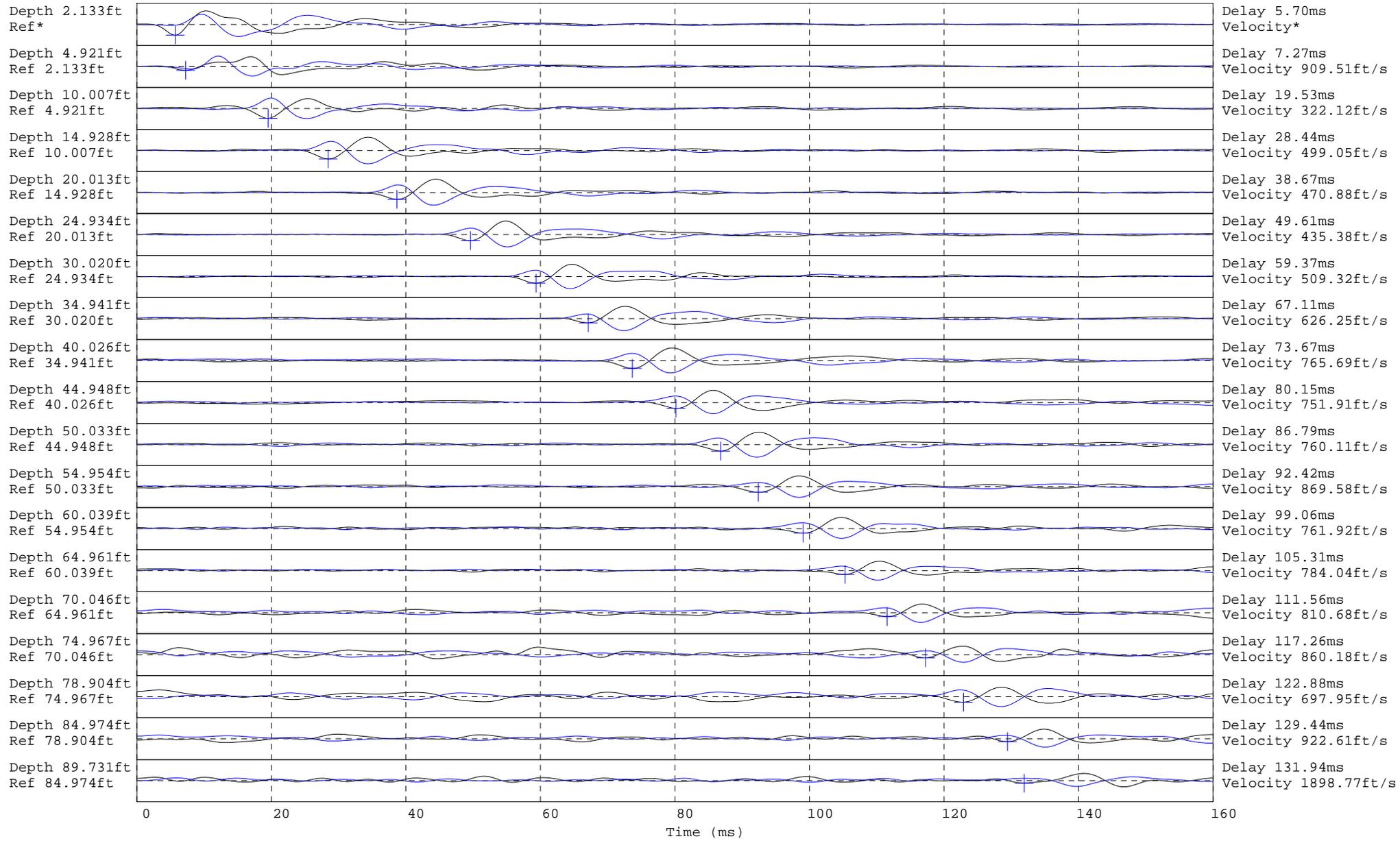
## CPT DATA



- |                              |                                 |                                |                                    |
|------------------------------|---------------------------------|--------------------------------|------------------------------------|
| ■ 1 - sensitive fine grained | ■ 4 - silty clay to clay        | ■ 7 - silty sand to sandy silt | ■ 10 - gravelly sand to sand       |
| ■ 2 - organic material       | ■ 5 - clayey silt to silty clay | ■ 8 - sand to silty sand       | ■ 11 - very stiff fine grained (*) |
| ■ 3 - clay                   | ■ 6 - sandy silt to clayey silt | ■ 9 - sand                     | ■ 12 - sand to clayey sand (*)     |

Cone Size 10cm squared

S\*Soil behavior type and SPT based on data from UBC-1983



Hammer to Rod String Distance 1.778 (m)

\* = Not Determined

## **APPENDIX B: LABORATORY TEST PROGRAM**

The laboratory testing program was performed to evaluate the physical and mechanical properties of the soils retrieved from the site to aid in verifying soil classification.

**Moisture Content:** The natural water content was determined (ASTM D2216) on 47 samples of the materials recovered from the borings. These water contents are recorded on the boring logs at the appropriate sample depths.

**Dry Densities:** In place dry density determinations (ASTM D2937) were performed on 44 samples to measure the unit weight of the subsurface soils. Results of these tests are shown on the boring logs at the appropriate sample depths.

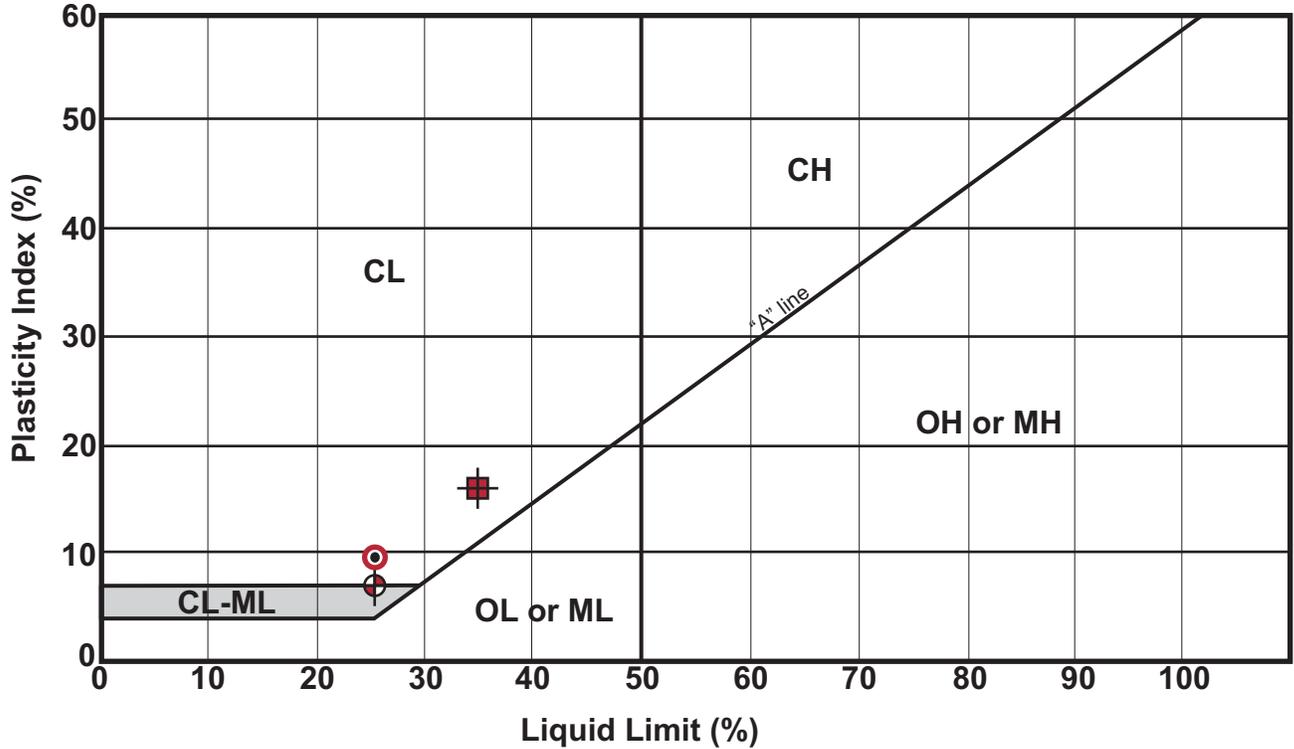
**Washed Sieve Analyses:** The percent soil fraction passing the No. 200 sieve (ASTM D1140) was determined on 6 samples of the subsurface soils to aid in the classification of these soils. Results of these tests are shown on the boring logs at the appropriate sample depths.

**Plasticity Index:** Three Plasticity Index determinations (ASTM D4318) were performed on samples of the subsurface soils to measure the range of water contents over which this material exhibits plasticity. The Plasticity Index was used to classify the soil in accordance with the Unified Soil Classification System and to evaluate the soil expansion potential. Results of these tests are shown on the boring logs at the appropriate sample depths.

**Undrained-Unconsolidated Triaxial Shear Strength:** The undrained shear strength was determined on 7 relatively undisturbed sample(s) by unconsolidated-undrained triaxial shear strength testing (ASTM D2850). The results of this test are included as part of this appendix.

**Consolidation:** Two consolidation tests (ASTM D2435) were performed on relatively undisturbed samples of the subsurface clayey soils to assist in evaluating the compressibility property of this soil. Results of the consolidation tests are presented graphically in this appendix.

### Plasticity Index (ASTM D4318) Testing Summary



Symbol	Boring No.	Depth (ft)	Natural Water Content (%)	Liquid Limit (%)	Plastic Limit (%)	Plasticity Index	Passing No. 200 (%)	Group Name (USCS - ASTM D2487)
⊙	EB-1	34.0	24	26	19	7	57	Sandy Silty Clay (CL-ML)
⊠	EB-2	2.0	15	35	19	16	—	Sandy Lean Clay (CL) [Fill]
⊙	EB-2	29.5	17	26	17	9	45	Clayey Sand (SC)



Plasticity Index Testing Summary

Skyport Plaza Hotel/Office  
San Jose, CA

Project Number  
704-1-1

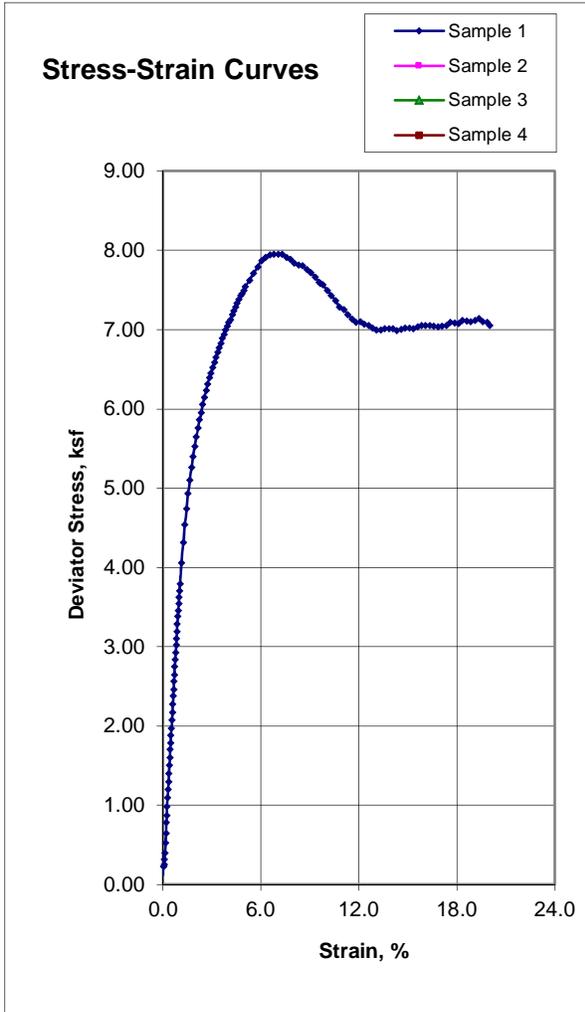
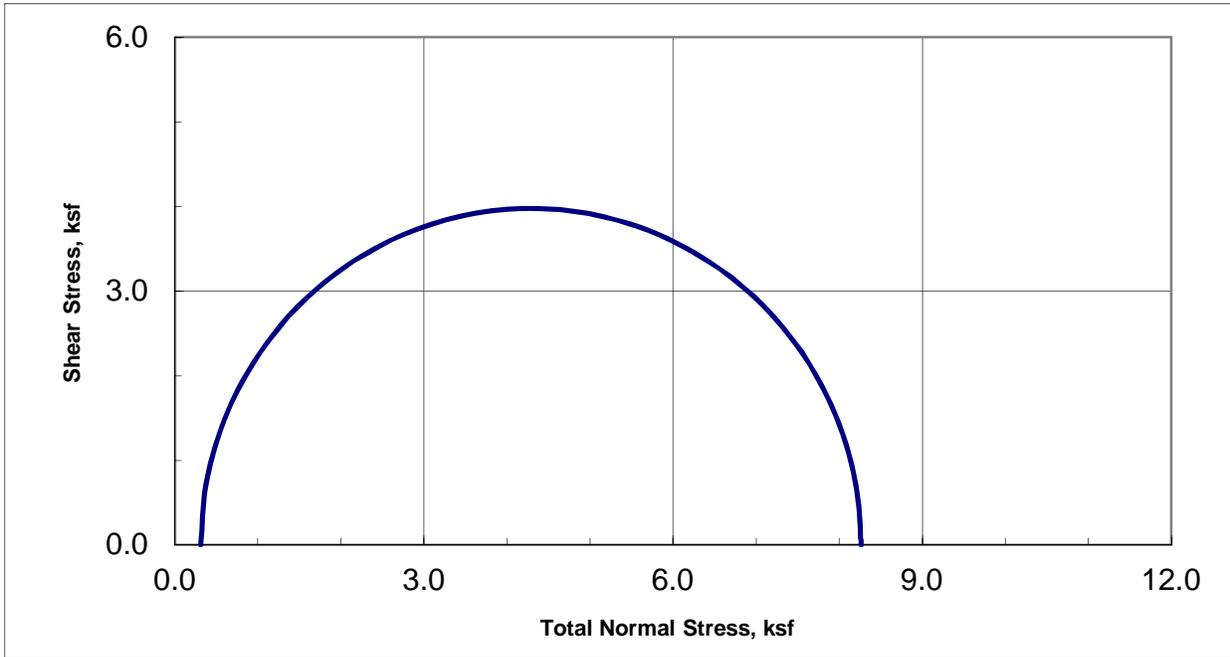
Figure Number  
Figure B1

Date  
March 2014

Drawn By  
FLL



## Unconsolidated-Undrained Triaxial Test ASTM D2850

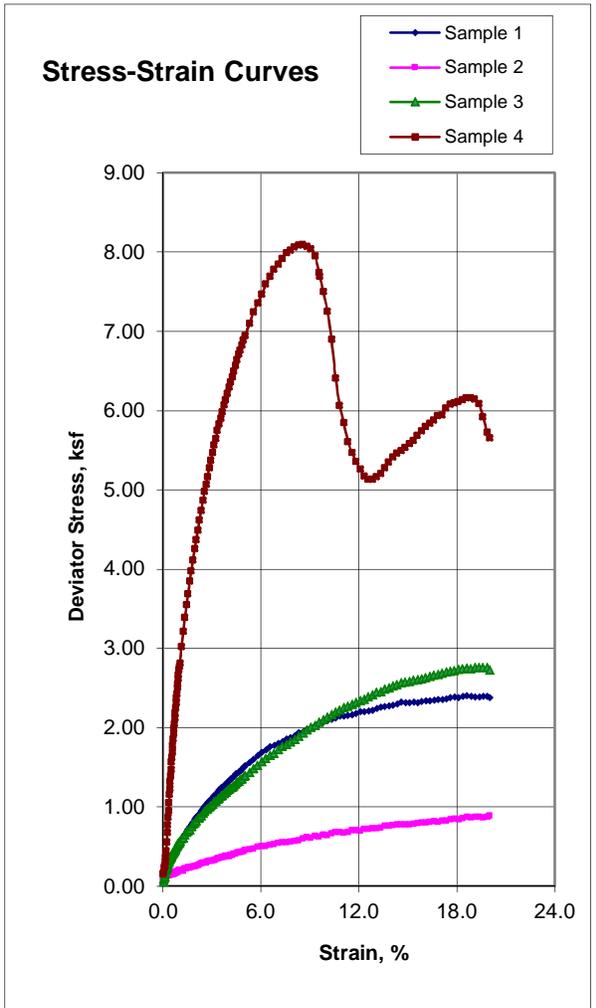
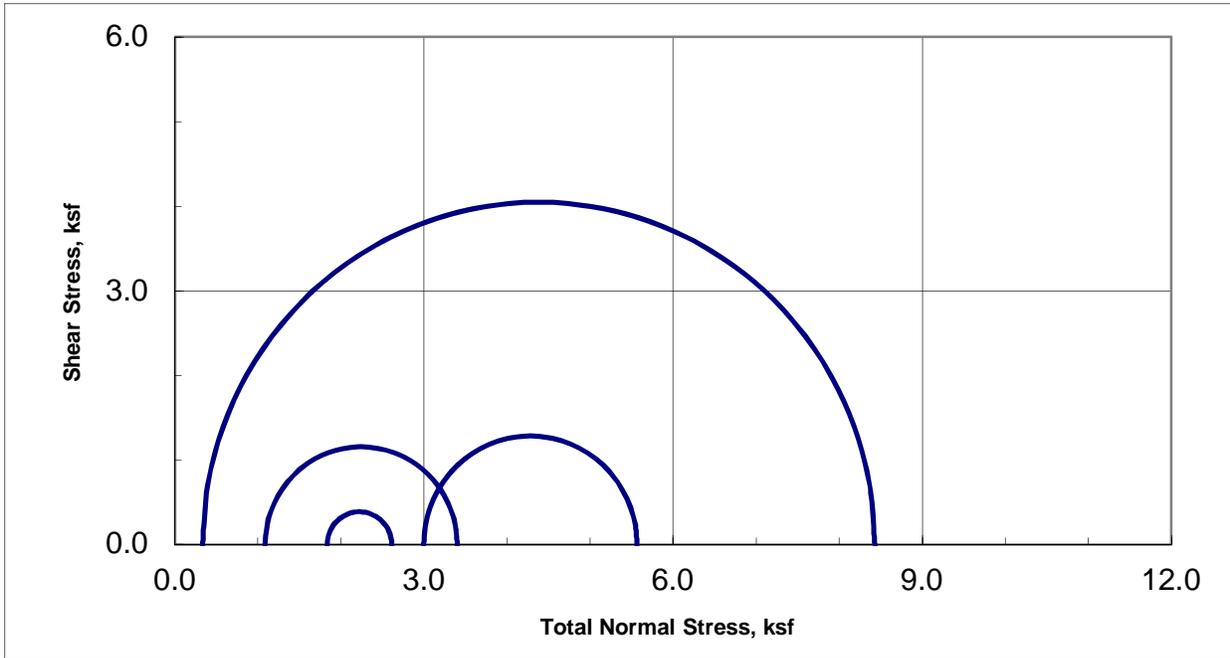


Sample Data				
	1	2	3	4
Moisture %	15.8			
Dry Den,pcf	115.6			
Void Ratio	0.459			
Saturation %	92.8			
Height in	5.01			
Diameter in	2.43			
Cell psi	2.2			
Strain %	6.80			
Deviator, ksf	7.954			
Rate %/min	1.00			
in/min	0.050			
Job No.:	640-642			
Client:	Cornerstone Earth Group			
Project:	Skyport Plaza Site - 704-1-1			
Boring:	EB-1			
Sample:	2B			
Depth ft:	4.0			
Visual Soil Description				
Sample #				
1	Very Dark Brown Sandy CLAY/ Clayey SAND			
2				
3				
4				
Remarks:				

Note: Strengths are picked at the peak deviator stress or 15% strain which ever occurs first per ASTM D2850.



## Unconsolidated-Undrained Triaxial Test ASTM D2850

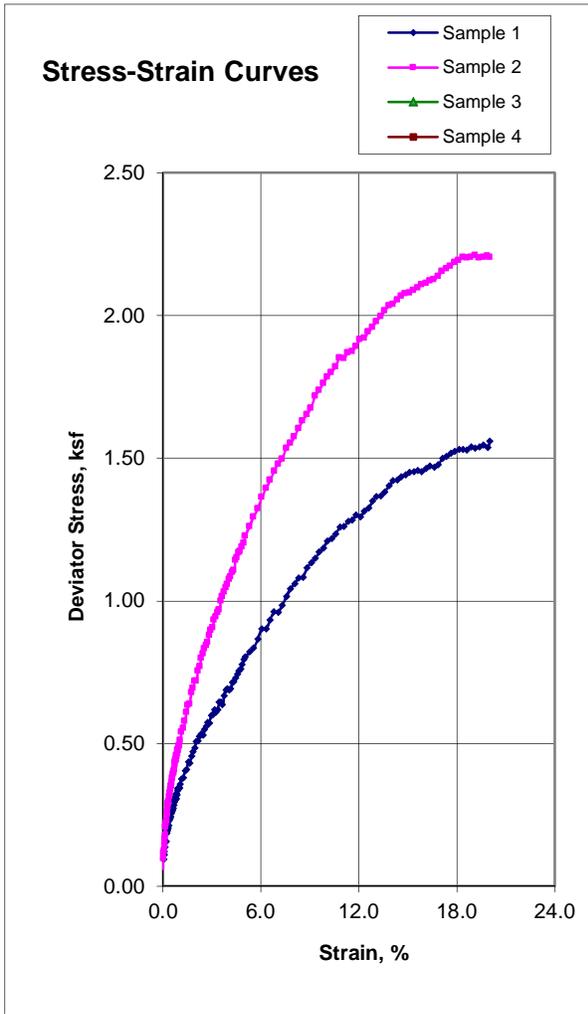
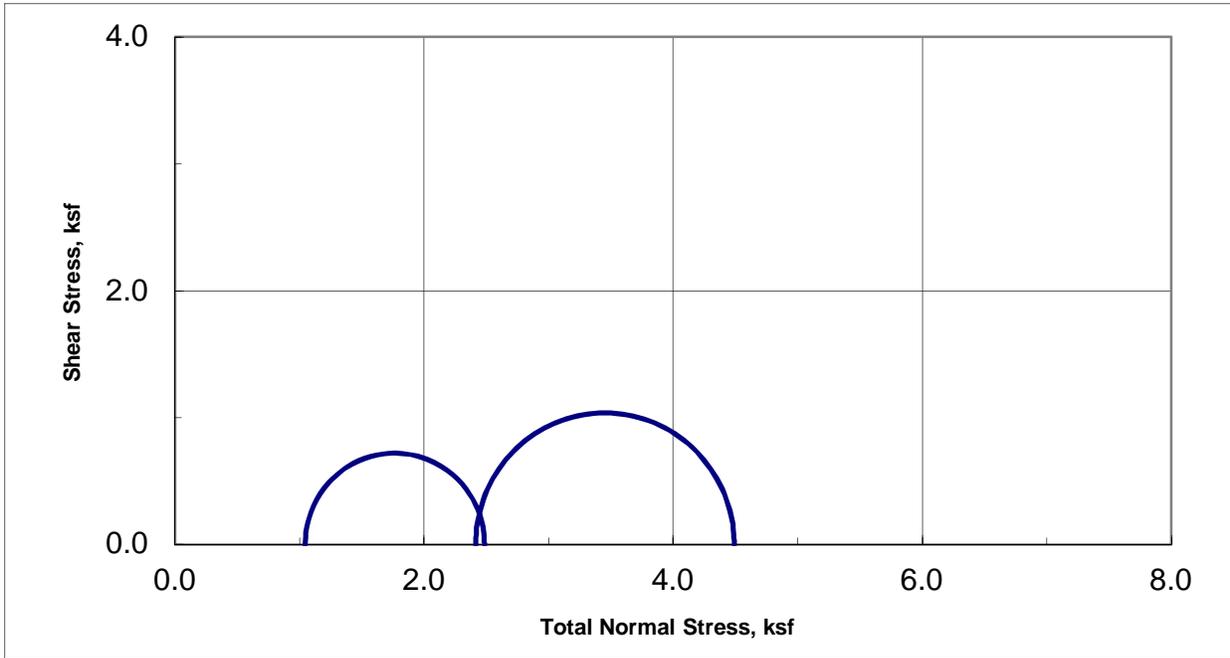


Sample Data				
	1	2	3	4
Moisture %	29.2	27.0	22.9	20.7
Dry Den,pcf	94.2	97.3	103.9	105.2
Void Ratio	0.790	0.732	0.622	0.603
Saturation %	100.0	99.5	99.5	92.8
Height in	5.01	4.97	5.00	5.03
Diameter in	2.41	2.41	2.41	2.40
Cell psi	7.5	12.7	20.8	2.3
Strain %	15.00	15.00	15.00	8.56
Deviator, ksf	2.313	0.777	2.569	8.095
Rate %/min	1.00	1.00	1.00	1.00
in/min	0.050	0.050	0.050	0.050
Job No.:	640-641a			
Client:	Cornerstone Earth Group			
Project:	Skyport Plaza Site - 704-1-1			
Boring:	EB-2	EB-2	EB-2	EB-3
Sample:	6B	11B	17B	2B
Depth ft:	19.5	39.5	69.5	4.0
Visual Soil Description				
Sample #				
1	Very Dark Olive Gray Clayey SAND			
2	Olive Clayey SAND			
3	Very Dark Bluish Gray Clayey SAND			
4	Very Dark Brown CLAY w/ Sand/ Sandy CLAY			
Remarks:				

Note: Strengths are picked at the peak deviator stress or 15% strain which ever occurs first per ASTM D2850.



Unconsolidated-Undrained Triaxial Test  
 ASTM D2850



Sample Data				
	1	2	3	4
Moisture %	31.8	25.3		
Dry Den,pcf	91.0	101.3		
Void Ratio	0.886	0.695		
Saturation %	98.6	100.0		
Height in	5.02	5.04		
Diameter in	2.40	2.40		
Cell psi	7.3	16.8		
Strain %	15.00	15.00		
Deviator, ksf	1.441	2.078		
Rate %/min	1.00	1.00		
in/min	0.050	0.050		
Job No.:	640-641b			
Client:	Cornerstone Earth Group			
Project:	Skyport Plaza Site - 704-1-1			
Boring:	EB-3	EB-3		
Sample:	6A	13B		
Depth ft:	19.0	54.5		
Visual Soil Description				
Sample #	1 Dark Olive Gray CLAY			
	2 Dark Greenish Gray Gray Sandy CLAY/ Clayey SAND			
	3			
	4			
Remarks:				

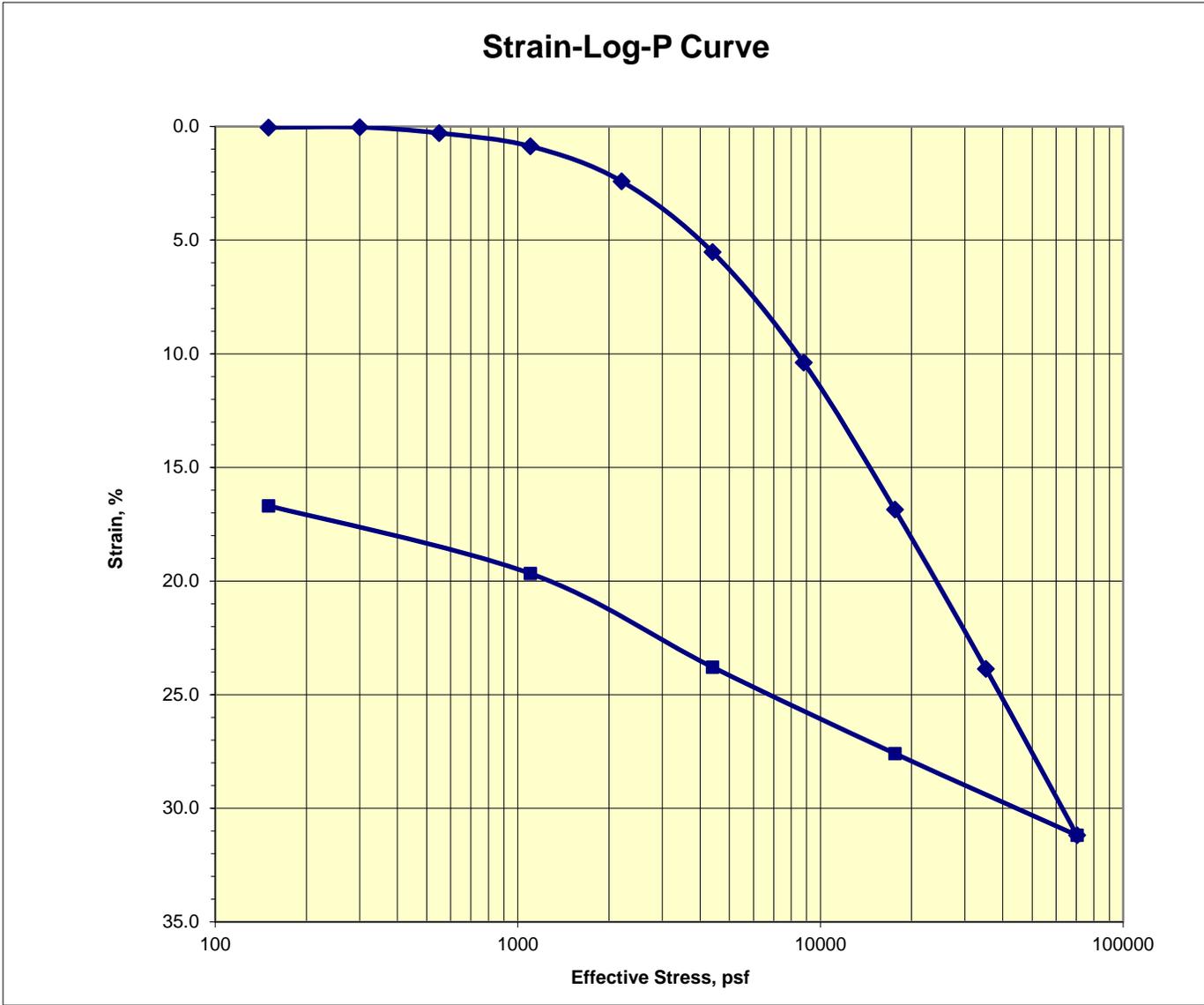
Note: Strengths are picked at the peak deviator stress or 15% strain which ever occurs first per ASTM D2850.



# Consolidation Test

## ASTM D2435

<b>Job No.:</b> 640-641	<b>Boring:</b> EB-2	<b>Run By:</b> MD
<b>Client:</b> Cornerstone Earth Group	<b>Sample:</b> 7B	<b>Reduced:</b> PJ
<b>Project:</b> Skyport Plaza Site - 704-1-1	<b>Depth, ft.:</b> 24.5	<b>Checked:</b> PJ/DC
<b>Soil Type:</b> Olive Brown CLAY		<b>Date:</b> 3/4/2014



Assumed Gs	2.8	<b>Initial</b>	<b>Final</b>
Moisture %:	49.9	36.9	
Dry Density, pcf:	71.9	86.0	
Void Ratio:	1.431	1.032	
% Saturation:	97.6	100.0	

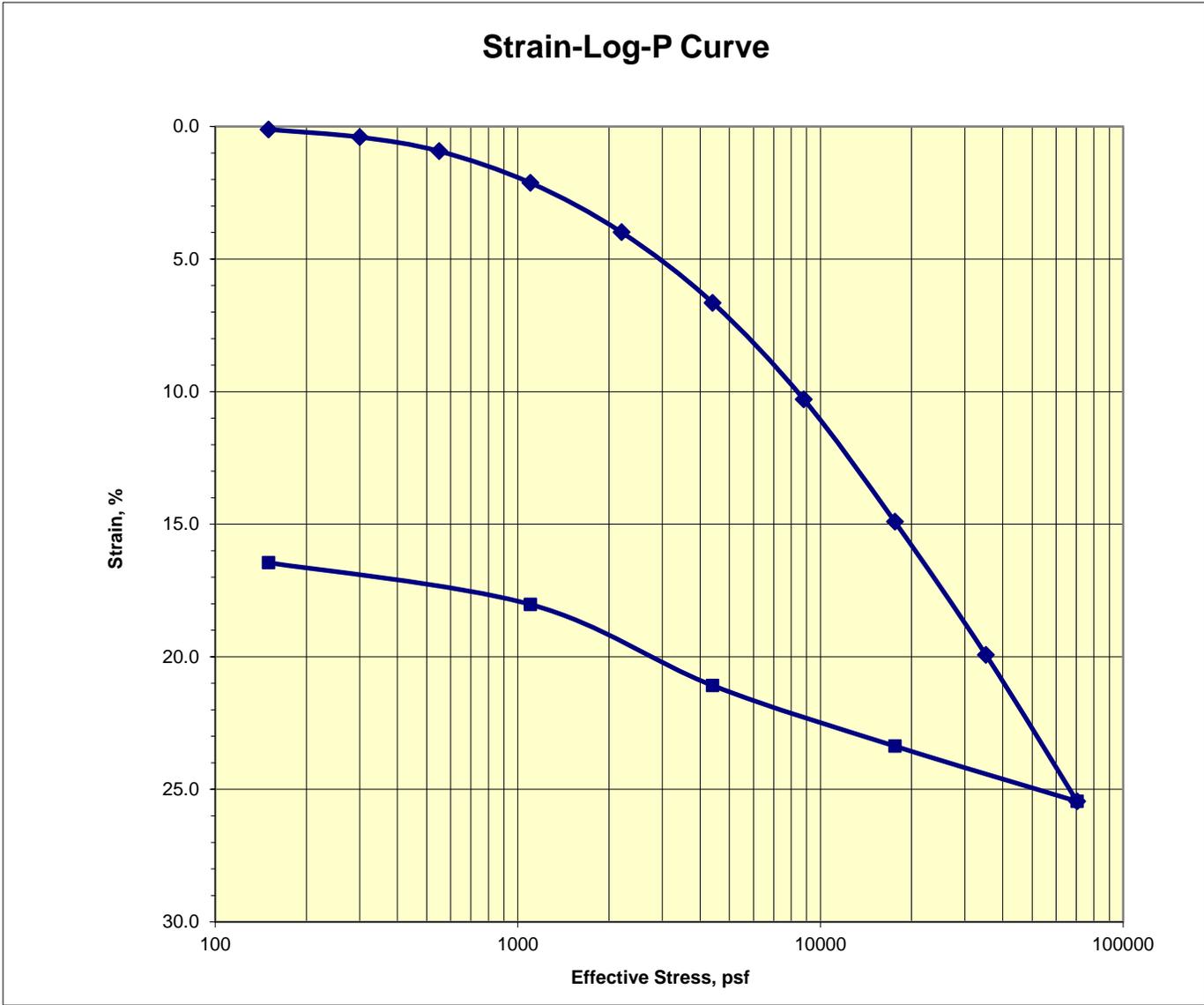
**Remarks:**



# Consolidation Test

## ASTM D2435

<b>Job No.:</b> 640-641	<b>Boring:</b> EB-3	<b>Run By:</b> MD
<b>Client:</b> Cornerstone Earth Group	<b>Sample:</b> 6B	<b>Reduced:</b> PJ
<b>Project:</b> Skyport Plaza Site - 704-1-1	<b>Depth, ft.:</b> 19.5	<b>Checked:</b> PJ/DC
<b>Soil Type:</b> Olive CLAY		<b>Date:</b> 3/4/2014



<b>Assumed Gs</b>	2.8	<b>Initial</b>	<b>Final</b>
<b>Moisture %:</b>		33.0	23.5
<b>Dry Density, pcf:</b>		87.8	105.4
<b>Void Ratio:</b>		0.990	0.659
<b>% Saturation:</b>		93.3	100.0

**Remarks:**

## **APPENDIX C: LIQUEFACTION ANALYSES CALCULATIONS**

Depth (ft)	q <sub>c</sub> (tsf)	f <sub>s</sub> (tsf)	σ <sub>vc</sub> (psf)	In situ σ'vc (psf)	Q	F (%)	lc	Layer "Plastic" PI > 7	Flag Soil Type	Fines (%)	q <sub>c</sub> -N near interfaces (soft layer)	Thin Layer Factor (K <sub>tl</sub> )	Interpreted q <sub>c</sub> -N	C <sub>N</sub>	q <sub>c</sub> -1N	q <sub>c</sub> -1N-CS	Stress Reduction Coeff. r <sub>d</sub>	CSR	K <sub>σ</sub> for Sand	CRR <sub>M=7.5</sub> σ'vc = 1 atm	CRR	Factor of Safety (CRR/CSR)	Vertical Strain ε <sub>v</sub>	Settlement (Inches)
0.164	11.760	0.207	20.5	20.5	112.815	1.758	2.04		Unsaturated	17.8			11.12	1.70	18.90	45.58	1.00	0.325	1.100	n.a.	n.a.	n.a.	0.00	0.00
0.328	13.040	0.417	41.0	41.0	88.393	3.206	2.30		Unsaturated	24.5			12.33	1.70	20.95	54.69	1.00	0.325	1.100	n.a.	n.a.	n.a.	0.00	0.00
0.492	385.750	0.827	61.5	61.5	2138.210	0.214	0.57		Unsaturated	0.6			364.60	1.70	619.83	619.83	1.00	0.325	1.100	n.a.	n.a.	n.a.	0.00	0.00
0.656	157.710	1.201	82.0	82.0	756.930	0.761	1.25		Unsaturated	5.0			149.06	1.70	253.41	253.45	1.00	0.325	1.100	n.a.	n.a.	n.a.	0.00	0.00
0.820	112.850	1.620	102.5	102.5	484.350	1.436	1.59		Unsaturated	9.3			106.66	1.70	181.33	195.24	1.00	0.325	1.100	n.a.	n.a.	n.a.	0.00	0.00
0.984	71.250	1.751	123.0	123.0	279.045	2.459	1.91		Unsaturated	15.0			67.34	1.70	114.48	155.60	1.00	0.325	1.100	n.a.	n.a.	n.a.	0.00	0.00
1.148	41.500	2.193	143.5	143.5	150.344	5.293	2.33		Unsaturated	25.4			39.22	1.70	66.68	115.50	1.00	0.325	1.100	n.a.	n.a.	n.a.	0.00	0.00
1.312	36.220	2.360	164.0	164.0	122.676	6.531	2.46		Unsaturated	29.1			34.23	1.70	58.20	106.30	1.00	0.325	1.100	n.a.	n.a.	n.a.	0.00	0.00
1.476	38.670	2.687	184.5	184.5	123.468	6.964	2.48		Unsaturated	29.7			36.55	1.70	62.14	111.82	1.00	0.325	1.100	n.a.	n.a.	n.a.	0.00	0.00
1.640	37.710	2.802	205.1	205.1	114.186	7.451	2.52		Unsaturated	31.1			35.64	1.70	60.59	110.24	1.00	0.325	1.100	n.a.	n.a.	n.a.	0.00	0.00
1.804	34.850	2.707	225.6	225.6	100.563	7.793	2.57		Unsaturated	32.6			32.94	1.70	56.00	104.51	1.00	0.325	1.100	n.a.	n.a.	n.a.	0.00	0.00
1.969	31.850	2.412	246.1	246.1	87.938	7.603	2.60		Unsaturated	33.5			30.10	1.70	51.18	98.24	1.00	0.325	1.100	n.a.	n.a.	n.a.	0.00	0.00
2.133	29.260	2.201	266.6	266.6	117.382	7.555	2.52		Unsaturated	31.0			27.66	1.70	47.02	92.06	1.00	0.325	1.100	n.a.	n.a.	n.a.	0.00	0.00
2.297	26.870	2.076	287.1	287.1	102.264	7.766	2.57		Unsaturated	32.5			25.40	1.70	43.17	87.28	1.00	0.325	1.100	n.a.	n.a.	n.a.	0.00	0.00
2.461	25.250	2.091	307.6	307.6	91.499	8.333	2.62		Unsaturated	34.2			23.87	1.70	40.57	84.14	1.00	0.325	1.100	n.a.	n.a.	n.a.	0.00	0.00
2.625	25.510	2.003	328.1	328.1	88.327	7.902	2.61		Unsaturated	33.9			24.11	1.70	40.99	84.64	1.00	0.325	1.100	n.a.	n.a.	n.a.	0.00	0.00
2.789	24.860	1.937	348.6	348.6	82.452	7.845	2.62		Unsaturated	34.4			23.50	1.70	39.95	83.33	1.00	0.325	1.100	n.a.	n.a.	n.a.	0.00	0.00
2.953	25.370	1.869	369.1	369.1	80.822	7.419	2.61		Unsaturated	33.9			23.98	1.70	40.76	84.35	1.00	0.324	1.100	n.a.	n.a.	n.a.	0.00	0.00
3.117	26.900	1.951	389.6	389.6	82.516	7.306	2.60		Unsaturated	33.5			25.43	1.70	43.22	87.58	1.00	0.324	1.100	n.a.	n.a.	n.a.	0.00	0.00
3.281	30.340	2.238	410.1	410.1	89.830	7.427	2.58		Unsaturated	33.0			28.68	1.70	48.75	94.88	1.00	0.324	1.100	n.a.	n.a.	n.a.	0.00	0.00
3.445	33.670	2.578	430.6	430.6	96.377	7.705	2.55		Unsaturated	32.9			31.82	1.70	54.10	102.02	1.00	0.324	1.100	n.a.	n.a.	n.a.	0.00	0.00
3.609	35.800	2.841	451.1	451.1	99.200	7.986	2.58		Unsaturated	33.0			33.84	1.70	57.52	106.66	1.00	0.324	1.100	n.a.	n.a.	n.a.	0.00	0.00
3.773	38.020	3.047	471.6	471.6	102.134	8.065	2.58		Unsaturated	32.9			35.94	1.70	61.09	111.41	1.00	0.324	1.100	n.a.	n.a.	n.a.	0.00	0.00
3.937	45.230	2.962	492.1	492.1	88.164	6.584	2.55		Unsaturated	31.8			42.75	1.70	72.68	126.63	0.99	0.323	1.100	n.a.	n.a.	n.a.	0.00	0.00
4.101	56.950	2.558	512.6	512.6	108.869	4.512	2.36		Unsaturated	26.1			53.83	1.70	91.51	148.82	0.99	0.323	1.100	n.a.	n.a.	n.a.	0.00	0.00
4.265	60.360	2.173	533.1	533.1	113.157	3.617	2.27		Unsaturated	23.7			57.05	1.70	96.99	153.24	0.99	0.323	1.100	n.a.	n.a.	n.a.	0.00	0.00
4.429	61.170	2.274	553.6	553.6	112.519	3.734	2.29		Unsaturated	24.0			57.82	1.70	98.08	155.59	0.99	0.323	1.100	n.a.	n.a.	n.a.	0.00	0.00
4.593	59.610	2.733	574.1	574.1	107.642	4.607	2.37		Unsaturated	26.4			56.34	1.68	94.69	153.24	0.99	0.323	1.100	n.a.	n.a.	n.a.	0.00	0.00
4.757	52.710	2.971	594.7	594.7	93.449	5.669	2.48		Unsaturated	29.7			49.82	1.70	84.59	141.76	0.99	0.322	1.100	n.a.	n.a.	n.a.	0.00	0.00
4.921	47.100	2.876	615.2	615.2	82.027	6.147	2.54		Unsaturated	31.6			44.52	1.70	75.68	130.60	0.99	0.322	1.100	n.a.	n.a.	n.a.	0.00	0.00
5.085	41.850	2.607	635.7	635.7	71.621	6.277	2.58		Unsaturated	33.1			39.56	1.70	67.24	119.70	0.99	0.322	1.100	n.a.	n.a.	n.a.	0.00	0.00
5.249	37.400	2.529	656.2	656.2	79.526	6.822	2.58		Unsaturated	33.1			35.35	1.70	60.09	110.11	0.99	0.322	1.100	n.a.	n.a.	n.a.	0.00	0.00
5.413	36.040	2.569	676.7	676.7	74.955	7.197	2.62		Unsaturated	34.2			34.06	1.70	57.91	107.43	0.99	0.322	1.100	n.a.	n.a.	n.a.	0.00	0.00
5.577	34.450	2.412	697.2	697.2	70.114	7.072	2.63		Unsaturated	34.6			32.56	1.70	55.35	104.07	0.99	0.321	1.100	n.a.	n.a.	n.a.	0.00	0.00
5.741	36.400	2.181	717.7	717.7	72.614	6.052	2.57		Unsaturated	32.5			34.40	1.69	57.98	107.15	0.99	0.321	1.100	n.a.	n.a.	n.a.	0.00	0.00
5.906	41.230	2.155	738.2	738.2	65.388	5.273	2.55		Unsaturated	32.0			38.97	1.64	63.74	114.71	0.99	0.321	1.100	n.a.	n.a.	n.a.	0.00	0.00
6.070	42.890	2.265	758.7	758.7	67.102	5.327	2.55		Unsaturated	31.8			40.54	1.61	65.20	116.63	0.99	0.321	1.100	n.a.	n.a.	n.a.	0.00	0.00
6.234	37.620	2.361	779.2	779.2	70.814	6.341	2.59		Unsaturated	33.3			35.56	1.62	57.63	106.85	0.99	0.321	1.100	n.a.	n.a.	n.a.	0.00	0.00
6.398	32.460	2.160	799.7	799.7	59.881	6.738	2.66		Unsaturated	35.5			30.68	1.63	50.12	97.20	0.99	0.321	1.100	n.a.	n.a.	n.a.	0.00	0.00
6.562	27.850	1.732	820.2	820.2	66.909	6.311	2.60		Clay	33.7			26.32	1.28	n.a.	n.a.	0.99	0.322	n.a.	n.a.	n.a.	0.00	0.00	
6.726	23.880	1.402	840.7	840.7	55.809	5.977	2.64		Clay	34.8			22.57	1.28	n.a.	n.a.	0.99	0.326	n.a.	n.a.	n.a.	0.00	0.00	
6.890	22.030	1.324	861.2	861.2	50.160	6.129	2.68		Clay	36.2			20.82	1.27	n.a.	n.a.	0.98	0.329	n.a.	n.a.	n.a.	0.00	0.00	
7.054	21.000	1.368	881.7	881.7	46.634	6.652	2.72		Clay	37.9			19.85	1.26	n.a.	n.a.	0.98	0.333	n.a.	n.a.	n.a.	0.00	0.00	
7.218	20.000	1.447	902.2	902.2	43.335	7.403	2.78		Clay	40.0			18.90	1.25	n.a.	n.a.	0.98	0.336	n.a.	n.a.	n.a.	0.00	0.00	
7.382	20.810	1.423	922.7	922.7	44.105	6.994	2.76		Clay	39.1			19.67	1.24	n.a.	n.a.	0.98	0.340	n.a.	n.a.	n.a.	0.00	0.00	
7.546	19.950	1.415	943.2	943.2	41.301	7.264	2.79		Clay	40.2			18.86	1.24	n.a.	n.a.	0.98	0.343	n.a.	n.a.	n.a.	0.00	0.00	
7.710	18.990	1.326	963.7	963.7	38.409	7.166	2.80		Clay	40.9			17.95	1.23	n.a.	n.a.	0.98	0.346	n.a.	n.a.	n.a.	0.00	0.00	
7.874	19.590	1.315	984.3	984.3	38.807	6.888	2.79		Clay	40.3			18.52	1.22	n.a.	n.a.	0.98	0.349	n.a.	n.a.	n.a.	0.00	0.00	
8.038	20.520	1.272	1004.8	1004.8	39.846	6.352	2.75		Clay	39.0			19.40	1.22	n.a.	n.a.	0.98	0.352	n.a.	n.a.	n.a.	0.00	0.00	
8.202	20.040	1.331	1025.3	1025.3	38.092	6.814	2.79		Clay	40.3			18.94	1.21	n.a.	n.a.	0.98	0.355	n.a.	n.a.	n.a.	0.00	0.00	
8.366	19.260	1.326	1045.8	1045.8	35.834	7.076	2.82		Clay	41.5			18.20	1.20	n.a.	n.a.	0.98	0.358	n.a.	n.a.	n.a.	0.00	0.00	
8.530	18.790	1.268	1066.3	1066.3	34.244	6.945	2.83		Clay	41.8			17.76	1.20	n.a.	n.a.	0.98	0.361	n.a.	n.a.	n.a.	0.00	0.00	
8.694	19.150	1.250	1086.8	1086.8	34.242	6.719	2.82		Clay	41.4			18.10	1.19	n.a.	n.a.	0.98	0.364	n.a.	n.a.	n.a.	0.00	0.00	
8.858	18.990	1.308	1107.3	1107.3	33.300	7.095	2.84		Clay	42.4			17.95	1.19	n.a.	n.a.	0.98	0.367	n.a.	n.a.	n.a.	0.00	0.00	
9.022	20.640	1.399	1127.8	1127.8	35.603	6.970	2.82		Clay	41.4			19.51	1.18	n.a.	n.a.	0.98	0.369	n.a.	n.a.	n.a.	0.00	0.00	
9.186	22.190	1.49																						

CPT No. 1

PGA ( $A_{max}$ ) 0.50

Total Settlement: 0.33 (Inches)

Depth (ft)	$q_c$ (tsf)	$f_s$ (tsf)	$\sigma_{vc}$ (psf)	In situ $\sigma'_{vc}$ (psf)	Q	F (%)	$l_c$	Layer "Plastic" PI > 7	Flag Soil Type	Fines (%)	$q_{c-N}$ near interfaces (soft layer)	Thin Layer Factor ( $K_{t1}$ )	Interpreted $q_{c-N}$	$C_N$	$q_{c1N}$	$q_{c1N-CS}$	Stress Reduction Coeff. $r_d$	CSR	$K_{cs}$ for Sand	$CRR_{M=7.5}$ $r'_{vc} = 1 \text{ atm}$	CRR	Factor of Safety (CRR/CSR)	Vertical Strain $\epsilon_v$	Settlement (Inches)
10.663	18.850	0.512	1332.8	1332.8	27.285	2.814	2.63		Clay	34.6			17.82	1.13	n.a.	n.a.	0.97	0.393	n.a.	n.a.	n.a.	n.a.	0.00	0.00
10.827	13.560	0.608	1353.3	1353.3	19.039	4.722	2.90		Clay	44.4			12.82	1.13	n.a.	n.a.	0.97	0.395	n.a.	n.a.	n.a.	n.a.	0.00	0.00
10.991	14.570	0.809	1373.9	1373.9	20.210	5.824	2.94		Clay	46.1			13.77	1.12	n.a.	n.a.	0.97	0.397	n.a.	n.a.	n.a.	n.a.	0.00	0.00
11.155	14.930	0.967	1394.4	1394.4	20.415	6.791	2.98		Clay	47.8			14.11	1.12	n.a.	n.a.	0.97	0.399	n.a.	n.a.	n.a.	n.a.	0.00	0.00
11.319	14.840	1.009	1414.9	1414.9	19.977	7.142	3.00		Clay	48.8			14.03	1.11	n.a.	n.a.	0.97	0.401	n.a.	n.a.	n.a.	n.a.	0.00	0.00
11.483	15.510	1.037	1435.4	1435.4	20.611	7.012	2.99		Clay	48.7			14.66	1.11	n.a.	n.a.	0.97	0.403	n.a.	n.a.	n.a.	n.a.	0.00	0.00
11.647	15.220	0.995	1455.9	1455.9	19.908	6.865	2.99		Clay	48.3			14.39	1.10	n.a.	n.a.	0.97	0.405	n.a.	n.a.	n.a.	n.a.	0.00	0.00
11.811	14.710	0.987	1476.4	1476.4	18.927	7.066	3.02		Clay	49.4			13.90	1.10	n.a.	n.a.	0.96	0.406	n.a.	n.a.	n.a.	n.a.	0.00	0.00
11.975	15.540	1.012	1496.9	1496.9	19.763	6.844	2.99		Clay	48.4			14.69	1.10	n.a.	n.a.	0.96	0.408	n.a.	n.a.	n.a.	n.a.	0.00	0.00
12.139	15.180	1.052	1517.4	1517.4	19.008	7.293	3.02		Clay	49.7			14.35	1.09	n.a.	n.a.	0.96	0.410	n.a.	n.a.	n.a.	n.a.	0.00	0.00
12.303	13.950	0.978	1537.9	1537.9	17.142	7.417	3.06		Clay	51.3			13.19	1.09	n.a.	n.a.	0.96	0.412	n.a.	n.a.	n.a.	n.a.	0.00	0.00
12.467	12.670	0.890	1558.4	1558.4	15.260	7.488	3.10		Clay	53.1			11.98	1.08	n.a.	n.a.	0.96	0.413	n.a.	n.a.	n.a.	n.a.	0.00	0.00
12.631	11.650	0.804	1578.9	1578.9	13.757	7.406	3.13		Clay	54.4			11.01	1.08	n.a.	n.a.	0.96	0.415	n.a.	n.a.	n.a.	n.a.	0.00	0.00
12.795	10.900	0.749	1599.4	1599.4	12.630	7.418	3.16		Clay	55.7			10.30	1.08	n.a.	n.a.	0.96	0.416	n.a.	n.a.	n.a.	n.a.	0.00	0.00
12.959	10.460	0.661	1619.9	1619.9	11.914	6.847	3.16		Clay	55.5			9.89	1.07	n.a.	n.a.	0.96	0.418	n.a.	n.a.	n.a.	n.a.	0.00	0.00
13.123	11.370	0.612	1640.4	1640.4	12.862	5.804	3.08		Clay	52.3			10.75	1.07	n.a.	n.a.	0.96	0.419	n.a.	n.a.	n.a.	n.a.	0.00	0.00
13.287	11.870	0.527	1660.9	1660.9	13.293	4.776	3.02		Clay	49.5			11.22	1.07	n.a.	n.a.	0.96	0.421	n.a.	n.a.	n.a.	n.a.	0.00	0.00
13.451	12.230	0.471	1681.4	1681.4	13.547	4.133	2.97		Clay	47.6			11.56	1.06	n.a.	n.a.	0.96	0.422	n.a.	n.a.	n.a.	n.a.	0.00	0.00
13.615	12.100	0.445	1701.9	1701.9	13.219	3.955	2.97		Clay	47.4			11.44	1.06	n.a.	n.a.	0.96	0.424	n.a.	n.a.	n.a.	n.a.	0.00	0.00
13.780	13.460	0.483	1722.4	1722.4	14.629	3.837	2.93		Clay	45.7			12.72	1.06	n.a.	n.a.	0.96	0.425	n.a.	n.a.	n.a.	n.a.	0.00	0.00
13.944	16.730	0.584	1742.9	1742.9	18.197	3.680	2.84		Clay	42.3			15.81	1.05	n.a.	n.a.	0.96	0.427	n.a.	n.a.	n.a.	n.a.	0.00	0.00
14.108	22.300	0.817	1763.5	1763.5	24.291	3.812	2.75		Clay	39.0			21.08	1.05	n.a.	n.a.	0.95	0.428	n.a.	n.a.	n.a.	n.a.	0.00	0.00
14.272	30.610	1.090	1784.0	1784.0	33.317	3.667	2.64		Clay	35.0			28.93	1.05	n.a.	n.a.	0.95	0.429	n.a.	n.a.	n.a.	n.a.	0.00	0.00
14.436	36.360	1.196	1804.5	1804.5	36.292	3.374	2.59		Sand	33.2	1.8		61.86	1.08	66.55	118.81	0.95	0.430	1.020	0.177	0.211	0.49	0.03	0.05
14.600	30.990	1.021	1825.0	1825.0	32.962	3.394	2.62		Clay	34.3			29.29	1.04	n.a.	n.a.	0.95	0.432	n.a.	n.a.	n.a.	n.a.	0.00	0.00
14.764	23.790	0.936	1845.5	1845.5	24.782	4.091	2.77		Clay	39.5			22.49	1.04	n.a.	n.a.	0.95	0.433	n.a.	n.a.	n.a.	n.a.	0.00	0.00
14.928	21.290	0.975	1866.0	1866.0	21.819	4.791	2.86		Clay	42.8			20.12	1.03	n.a.	n.a.	0.95	0.434	n.a.	n.a.	n.a.	n.a.	0.00	0.00
15.092	22.530	1.086	1886.0	1880.3	22.961	5.029	2.85		Clay	42.8			21.29	1.03	n.a.	n.a.	0.95	0.435	n.a.	n.a.	n.a.	n.a.	0.00	0.00
15.256	21.860	1.149	1905.7	1889.7	22.127	5.496	2.89		Clay	44.2			20.66	1.03	n.a.	n.a.	0.95	0.436	n.a.	n.a.	n.a.	n.a.	0.00	0.00
15.420	23.270	1.396	1925.4	1899.2	23.491	6.258	2.91		Clay	45.0			21.99	1.03	n.a.	n.a.	0.95	0.438	n.a.	n.a.	n.a.	n.a.	0.00	0.00
15.584	31.020	1.716	1945.1	1908.6	31.486	5.711	2.79		Clay	40.4			29.32	1.03	n.a.	n.a.	0.95	0.439	n.a.	n.a.	n.a.	n.a.	0.00	0.00
15.748	29.860	1.764	1964.8	1918.1	30.111	6.109	2.83		Clay	41.7			28.22	1.03	n.a.	n.a.	0.95	0.440	n.a.	n.a.	n.a.	n.a.	0.00	0.00
15.912	29.900	1.710	1984.4	1927.5	29.995	5.914	2.82		Clay	41.4			28.26	1.02	n.a.	n.a.	0.95	0.441	n.a.	n.a.	n.a.	n.a.	0.00	0.00
16.076	38.240	1.878	2004.1	1937.0	38.449	5.043	2.69		Clay	36.8			36.14	1.02	n.a.	n.a.	0.95	0.442	n.a.	n.a.	n.a.	n.a.	0.00	0.00
16.240	39.200	2.162	2023.8	1946.4	39.239	5.662	2.72		Clay	37.9			37.05	1.02	n.a.	n.a.	0.94	0.443	n.a.	n.a.	n.a.	n.a.	0.00	0.00
16.404	28.690	2.013	2043.5	1955.9	28.292	7.277	2.90		Clay	44.6			27.12	1.02	n.a.	n.a.	0.94	0.444	n.a.	n.a.	n.a.	n.a.	0.00	0.00
16.568	22.210	1.435	2063.2	1965.3	21.552	6.775	2.96		Clay	47.1			20.99	1.02	n.a.	n.a.	0.94	0.445	n.a.	n.a.	n.a.	n.a.	0.00	0.00
16.732	19.700	1.087	2082.9	1974.8	18.897	5.826	2.96		Clay	47.0			18.62	1.02	n.a.	n.a.	0.94	0.446	n.a.	n.a.	n.a.	n.a.	0.00	0.00
16.896	21.120	0.944	2102.6	1984.2	20.228	4.706	2.87		Clay	43.6			19.96	1.02	n.a.	n.a.	0.94	0.447	n.a.	n.a.	n.a.	n.a.	0.00	0.00
17.060	21.240	0.938	2122.2	1993.7	20.243	4.647	2.87		Clay	43.5			20.08	1.02	n.a.	n.a.	0.94	0.447	n.a.	n.a.	n.a.	n.a.	0.00	0.00
17.224	17.780	0.847	2141.9	2003.1	16.683	5.068	2.96		Clay	47.0			16.81	1.01	n.a.	n.a.	0.94	0.448	n.a.	n.a.	n.a.	n.a.	0.00	0.00
17.388	14.990	0.613	2161.6	2012.6	13.822	4.406	2.98		Clay	48.0			14.17	1.01	n.a.	n.a.	0.94	0.449	n.a.	n.a.	n.a.	n.a.	0.00	0.00
17.552	12.920	0.563	2181.3	2022.0	11.701	4.761	3.06		Clay	51.3			12.21	1.01	n.a.	n.a.	0.94	0.450	n.a.	n.a.	n.a.	n.a.	0.00	0.00
17.717	11.360	0.504	2201.0	2031.5	10.101	4.913	3.12		Clay	53.9			10.74	1.01	n.a.	n.a.	0.94	0.451	n.a.	n.a.	n.a.	n.a.	0.00	0.00
17.881	10.360	0.460	2220.7	2040.9	9.064	4.972	3.16		Clay	55.8			9.79	1.01	n.a.	n.a.	0.94	0.452	n.a.	n.a.	n.a.	n.a.	0.00	0.00
18.045	9.740	0.461	2240.4	2050.4	8.408	5.345	3.21		Clay	57.9			9.21	1.01	n.a.	n.a.	0.94	0.452	n.a.	n.a.	n.a.	n.a.	0.00	0.00
18.209	9.350	0.501	2260.0	2059.8	7.981	6.090	3.26		Clay	60.4			8.84	1.01	n.a.	n.a.	0.93	0.453	n.a.	n.a.	n.a.	n.a.	0.00	0.00
18.373	8.690	0.486	2279.7	2069.3	7.297	6.436	3.30		Clay	62.6			8.21	1.01	n.a.	n.a.	0.93	0.454	n.a.	n.a.	n.a.	n.a.	0.00	0.00
18.537	9.430	0.465	2299.4	2078.7	7.967	5.610	3.24		Clay	59.3			8.91	1.00	n.a.	n.a.	0.93	0.455	n.a.	n.a.	n.a.	n.a.	0.00	0.00
18.701	11.080	0.532	2319.1	2088.2	9.502	5.358	3.16		Clay	55.9			10.47	1.00	n.a.	n.a.	0.93	0.455	n.a.	n.a.	n.a.	n.a.	0.00	0.00
18.865	12.920	0.542	2338.8	2097.6	11.204	4.614	3.07		Clay	51.6			12.21	1.00	n.a.	n.a.	0.93	0.456	n.a.	n.a.	n.a.	n.a.	0.00	0.00
19.029	12.150	0.521	2358.5	2107.1	10.413	4.744	3.10		Clay	53.1			11.48	1.00	n.a.	n.a.	0.93	0.457	n.a.	n.a.	n.a.	n.a.	0.00	0.00
19.193	11.010	0.475	2378.1	2116.5	9.280	4.837	3.14		Clay	55.1			10.41	1.00	n.a.	n.a.	0.93	0.457	n.a.	n.a.	n.a.	n.a.	0.00	0.00
19.357	10.270	0.453	2397.8	2126.0	8.534	4.993	3.18		Clay	56.8			9.71	1.00	n.a.	n.a.	0.93	0.458	n.a.	n.a.	n.a.	n.a.	0.00	0.00
19.521	9.920	0.421	2417.5	2135.4	8.159	4.831	3.19		Clay	57.1			9.38	1.00	n.a.	n.a.	0.93	0.459	n.a.	n.a.	n.a.	n.a.	0.00	0.00
19.685	9.180	0.402	2437.2	2144.9	7.424	5.047	3.23		Clay	59.2			8.68	1.00	n.a.	n.a.	0.93	0.459	n.a.	n.a.	n.a.	n.a.	0.00	0.00
19.849	8.200	0.357	2456.9	2154.3	6.472																			

CPT No.

1

PGA ( $A_{max}$ )

0.50

Total Settlement: 0.33 (Inches)

Depth (ft)	$q_c$ (tsf)	$f_s$ (tsf)	$\sigma_{vc}$ (psf)	In situ $\sigma'_{vc}$ (psf)	Q	F (%)	$l_c$	Layer "Plastic" PI > 7	Flag Soil Type	Fines (%)	$q_{c-N}$ near interfaces (soft layer)	Thin Layer Factor ( $K_{t1}$ )	Interpreted $q_{c-N}$	$C_N$	$q_{c1N}$	$q_{c1N-CS}$	Stress Reduction Coeff. $r_d$	CSR	$K_{cs}$ for Sand	$CRR_{M=7.5}$ $r'_{vc} = 1 \text{ atm}$	CRR	Factor of Safety (CRR/CSR)	Vertical Strain $\epsilon_v$	Settlement (Inches)
21.161	6.920	0.344	2614.4	2229.9	5.034	6.129	3.42		Clay	68.5			6.54	0.99	n.a.	n.a.	0.92	0.464	n.a.	n.a.	n.a.	n.a.	0.00	0.00
21.325	6.610	0.301	2634.1	2239.3	4.727	5.692	3.42		Clay	68.6			6.25	0.99	n.a.	n.a.	0.92	0.465	n.a.	n.a.	n.a.	n.a.	0.00	0.00
21.490	6.060	0.248	2653.7	2248.8	4.209	5.233	3.44		Clay	69.7			5.73	0.98	n.a.	n.a.	0.92	0.465	n.a.	n.a.	n.a.	n.a.	0.00	0.00
21.654	5.710	0.227	2673.4	2258.2	3.873	5.184	3.47		Clay	71.2			5.40	0.98	n.a.	n.a.	0.92	0.465	n.a.	n.a.	n.a.	n.a.	0.00	0.00
21.818	6.350	0.302	2693.1	2267.7	4.413	6.040	3.46		Clay	70.7			6.00	0.98	n.a.	n.a.	0.92	0.466	n.a.	n.a.	n.a.	n.a.	0.00	0.00
21.982	7.740	0.428	2712.8	2277.1	5.607	6.709	3.41		Clay	67.7			7.32	0.98	n.a.	n.a.	0.92	0.466	n.a.	n.a.	n.a.	n.a.	0.00	0.00
22.146	9.870	0.526	2732.5	2286.6	7.438	6.184	3.29		Clay	61.7			9.33	0.98	n.a.	n.a.	0.91	0.467	n.a.	n.a.	n.a.	n.a.	0.00	0.00
22.310	10.210	0.605	2752.2	2296.0	7.695	6.849	3.30		Clay	62.5			9.65	0.98	n.a.	n.a.	0.91	0.467	n.a.	n.a.	n.a.	n.a.	0.00	0.00
22.474	11.000	0.635	2771.9	2305.5	8.340	6.605	3.26		Clay	60.7			10.40	0.98	n.a.	n.a.	0.91	0.467	n.a.	n.a.	n.a.	n.a.	0.00	0.00
22.638	11.410	0.659	2791.5	2314.9	8.652	6.583	3.25		Clay	60.0			10.78	0.98	n.a.	n.a.	0.91	0.468	n.a.	n.a.	n.a.	n.a.	0.00	0.00
22.802	11.850	0.712	2811.2	2324.4	8.987	6.821	3.25		Clay	59.9			11.20	0.98	n.a.	n.a.	0.91	0.468	n.a.	n.a.	n.a.	n.a.	0.00	0.00
22.966	12.350	0.741	2830.9	2333.8	9.370	6.777	3.23		Clay	59.1			11.67	0.97	n.a.	n.a.	0.91	0.469	n.a.	n.a.	n.a.	n.a.	0.00	0.00
23.130	12.470	0.746	2850.6	2343.3	9.427	6.753	3.23		Clay	59.0			11.79	0.97	n.a.	n.a.	0.91	0.469	n.a.	n.a.	n.a.	n.a.	0.00	0.00
23.294	13.010	0.706	2870.3	2352.7	9.840	6.099	3.19		Clay	57.0			12.30	0.97	n.a.	n.a.	0.91	0.469	n.a.	n.a.	n.a.	n.a.	0.00	0.00
23.458	13.120	0.683	2890.0	2362.2	9.885	5.846	3.17		Clay	56.4			12.40	0.97	n.a.	n.a.	0.91	0.470	n.a.	n.a.	n.a.	n.a.	0.00	0.00
23.622	12.830	0.642	2909.6	2371.6	9.593	5.647	3.17		Clay	56.4			12.13	0.97	n.a.	n.a.	0.91	0.470	n.a.	n.a.	n.a.	n.a.	0.00	0.00
23.786	11.880	0.613	2929.3	2381.1	8.748	5.889	3.22		Clay	58.4			11.23	0.97	n.a.	n.a.	0.91	0.470	n.a.	n.a.	n.a.	n.a.	0.00	0.00
23.950	11.540	0.586	2949.0	2390.5	8.421	5.825	3.23		Clay	58.9			10.91	0.97	n.a.	n.a.	0.91	0.470	n.a.	n.a.	n.a.	n.a.	0.00	0.00
24.114	11.090	0.574	2968.7	2400.0	8.005	5.979	3.25		Clay	60.1			10.48	0.97	n.a.	n.a.	0.90	0.471	n.a.	n.a.	n.a.	n.a.	0.00	0.00
24.278	10.670	0.543	2988.4	2409.4	7.617	5.918	3.27		Clay	60.8			10.09	0.97	n.a.	n.a.	0.90	0.471	n.a.	n.a.	n.a.	n.a.	0.00	0.00
24.442	10.730	0.511	3008.1	2418.9	7.628	5.539	3.25		Clay	59.9			10.14	0.97	n.a.	n.a.	0.90	0.471	n.a.	n.a.	n.a.	n.a.	0.00	0.00
24.606	11.160	0.507	3027.8	2428.3	7.945	5.258	3.22		Clay	58.6			10.55	0.96	n.a.	n.a.	0.90	0.472	n.a.	n.a.	n.a.	n.a.	0.00	0.00
24.770	11.690	0.561	3047.4	2437.8	8.341	5.515	3.22		Clay	58.4			11.05	0.96	n.a.	n.a.	0.90	0.472	n.a.	n.a.	n.a.	n.a.	0.00	0.00
24.934	11.480	0.588	3067.1	2447.2	8.129	5.909	3.24		Clay	59.7			10.85	0.96	n.a.	n.a.	0.90	0.472	n.a.	n.a.	n.a.	n.a.	0.00	0.00
25.098	11.690	0.570	3086.8	2456.7	8.260	5.613	3.22		Clay	58.8			11.05	0.96	n.a.	n.a.	0.90	0.472	n.a.	n.a.	n.a.	n.a.	0.00	0.00
25.262	12.300	0.591	3106.5	2466.1	8.716	5.500	3.20		Clay	57.6			11.63	0.96	n.a.	n.a.	0.90	0.472	n.a.	n.a.	n.a.	n.a.	0.00	0.00
25.427	13.270	0.591	3126.2	2475.6	9.458	5.047	3.15		Clay	55.3			12.54	0.96	n.a.	n.a.	0.90	0.473	n.a.	n.a.	n.a.	n.a.	0.00	0.00
25.591	11.800	0.576	3145.9	2485.0	8.231	5.632	3.23		Clay	58.9			11.15	0.96	n.a.	n.a.	0.90	0.473	n.a.	n.a.	n.a.	n.a.	0.00	0.00
25.755	11.260	0.538	3165.6	2494.5	7.759	5.556	3.24		Clay	59.7			10.64	0.96	n.a.	n.a.	0.90	0.473	n.a.	n.a.	n.a.	n.a.	0.00	0.00
25.919	11.850	0.579	3185.2	2503.9	8.193	5.643	3.23		Clay	59.0			11.20	0.96	n.a.	n.a.	0.89	0.473	n.a.	n.a.	n.a.	n.a.	0.00	0.00
26.083	13.200	0.668	3204.9	2513.4	9.229	5.762	3.19		Clay	57.3			12.48	0.96	n.a.	n.a.	0.89	0.473	n.a.	n.a.	n.a.	n.a.	0.00	0.00
26.247	12.720	0.709	3224.6	2522.8	8.806	6.380	3.24		Clay	59.4			12.02	0.95	n.a.	n.a.	0.89	0.474	n.a.	n.a.	n.a.	n.a.	0.00	0.00
26.411	11.570	0.637	3244.3	2532.3	7.857	6.401	3.28		Clay	61.3			10.94	0.95	n.a.	n.a.	0.89	0.474	n.a.	n.a.	n.a.	n.a.	0.00	0.00
26.575	9.750	0.565	3264.0	2541.7	6.388	6.961	3.37		Clay	61.3			9.22	0.95	n.a.	n.a.	0.89	0.474	n.a.	n.a.	n.a.	n.a.	0.00	0.00
26.739	8.370	0.480	3283.7	2551.2	5.275	7.134	3.44		Clay	69.7			7.91	0.95	n.a.	n.a.	0.89	0.474	n.a.	n.a.	n.a.	n.a.	0.00	0.00
26.903	8.520	0.436	3303.3	2560.6	5.365	6.345	3.41		Clay	67.8			8.05	0.95	n.a.	n.a.	0.89	0.474	n.a.	n.a.	n.a.	n.a.	0.00	0.00
27.067	9.170	0.480	3323.0	2570.1	5.843	6.393	3.38		Clay	66.3			8.67	0.95	n.a.	n.a.	0.89	0.474	n.a.	n.a.	n.a.	n.a.	0.00	0.00
27.231	11.660	0.562	3342.7	2579.5	7.745	5.623	3.25		Clay	59.8			11.02	0.95	n.a.	n.a.	0.89	0.474	n.a.	n.a.	n.a.	n.a.	0.00	0.00
27.395	14.910	0.632	3362.4	2589.0	10.219	4.774	3.11		Clay	53.4			14.09	0.95	n.a.	n.a.	0.89	0.474	n.a.	n.a.	n.a.	n.a.	0.00	0.00
27.559	16.450	0.630	3382.1	2598.4	11.360	4.267	3.04		Clay	50.5			15.55	0.95	n.a.	n.a.	0.89	0.475	n.a.	n.a.	n.a.	n.a.	0.00	0.00
27.723	19.640	0.667	3401.8	2607.9	13.758	3.719	2.94		Clay	46.2			18.56	0.95	n.a.	n.a.	0.88	0.475	n.a.	n.a.	n.a.	n.a.	0.00	0.00
27.887	21.930	0.657	3421.5	2617.3	15.450	3.247	2.86		Clay	43.2			20.73	0.95	n.a.	n.a.	0.88	0.475	n.a.	n.a.	n.a.	n.a.	0.00	0.00
28.051	20.830	0.680	3441.1	2626.7	14.550	3.557	2.91		Clay	44.9			19.69	0.94	n.a.	n.a.	0.88	0.475	n.a.	n.a.	n.a.	n.a.	0.00	0.00
28.215	20.400	0.669	3460.8	2636.2	14.164	3.581	2.92		Clay	45.4			19.28	0.94	n.a.	n.a.	0.88	0.475	n.a.	n.a.	n.a.	n.a.	0.00	0.00
28.379	17.360	0.627	3480.5	2645.6	11.808	4.012	3.01		Clay	49.2			16.41	0.94	n.a.	n.a.	0.88	0.475	n.a.	n.a.	n.a.	n.a.	0.00	0.00
28.543	13.250	0.487	3500.2	2655.1	8.663	4.230	3.13		Clay	54.6			12.52	0.94	n.a.	n.a.	0.88	0.475	n.a.	n.a.	n.a.	n.a.	0.00	0.00
28.707	11.720	0.445	3519.9	2664.5	7.476	4.469	3.20		Clay	57.6			11.08	0.94	n.a.	n.a.	0.88	0.475	n.a.	n.a.	n.a.	n.a.	0.00	0.00
28.871	11.520	0.385	3539.6	2674.0	7.293	3.947	3.18		Clay	56.6			10.89	0.94	n.a.	n.a.	0.88	0.475	n.a.	n.a.	n.a.	n.a.	0.00	0.00
29.035	10.990	0.382	3559.3	2683.4	6.865	4.142	3.21		Clay	58.1			10.39	0.94	n.a.	n.a.	0.88	0.475	n.a.	n.a.	n.a.	n.a.	0.00	0.00
29.199	12.820	0.298	3578.9	2692.9	8.192	2.699	3.04		Clay	50.6			12.12	0.94	n.a.	n.a.	0.88	0.475	n.a.	n.a.	n.a.	n.a.	0.00	0.00
29.364	10.940	0.193	3598.6	2702.3	6.765	2.106	3.06		Clay	51.2			10.34	0.94	n.a.	n.a.	0.88	0.475	n.a.	n.a.	n.a.	n.a.	0.00	0.00
29.528	8.090	0.180	3618.3	2711.8	4.632	2.869	3.27		Clay	60.8			7.65	0.94	n.a.	n.a.	0.87	0.475	n.a.	n.a.	n.a.	n.a.	0.00	0.00
29.692	7.970	0.137	3638.0	2721.2	4.521	2.234	3.22		Clay	58.7			7.53	0.94	n.a.	n.a.	0.87	0.475	n.a.	n.a.	n.a.	n.a.	0.00	0.00
29.856	8.510	0.312	3657.7	2730.7	4.893	4.668	3.36		Clay	65.5			8.04	0.93	n.a.	n.a.	0.87	0.475	n.a.	n.a.	n.a.	n.a.	0.00	0.00
30.020	14.210	0.305	3677.4	2740.1	9.030	2.463	2.99		Clay	48.1			13.43	0.93	n.a.	n.a.	0.87	0.475	n.a.	n.a.	n.a.	n.a.	0.00	0.00
30.184	19.650	0.363	3697.0	2749.6	12.948	2.037	2.81		Clay	41.1			18.57	0.93	n.a.	n.a.	0.87	0.475	n.a.	n.a.	n.a.	n.a.	0.00	0.00
30.348	13.520	0.548	3716.7	2759.0	8.453	4.695																		

CPT No. 1

PGA ( $A_{max}$ ) 0.50

Total Settlement: 0.33 (Inches)

Depth (ft)	$q_c$ (tsf)	$f_s$ (tsf)	$\sigma_{vc}$ (psf)	In situ $\sigma'_{vc}$ (psf)	Q	F (%)	$l_c$	Layer "Plastic" PI > 7	Flag Soil Type	Fines (%)	$q_{c-N}$ near interfaces (soft layer)	Thin Layer Factor ( $K_{t1}$ )	Interpreted $q_{c-N}$	$C_N$	$q_{c1N}$	$q_{c1N-CS}$	Stress Reduction Coeff. $r_d$	CSR	$K_{cs}$ for Sand	$CRR_{M=7.5}$ $r'_{vc} = 1 \text{ atm}$	CRR	Factor of Safety (CRR/CSR)	Vertical Strain $\epsilon_v$	Settlement (Inches)
31.660	16.380	0.425	3874.2	2834.6	10.190	2.943	2.99		Clay	48.1			15.48	0.93	n.a.	n.a.	0.86	0.475	n.a.	n.a.	n.a.	n.a.	0.00	0.00
31.824	14.060	0.478	3893.9	2844.1	8.518	3.943	3.12		Clay	54.0			13.29	0.92	n.a.	n.a.	0.86	0.475	n.a.	n.a.	n.a.	n.a.	0.00	0.00
31.988	13.290	0.525	3913.6	2853.5	7.943	4.633	3.19		Clay	57.0			12.56	0.92	n.a.	n.a.	0.86	0.475	n.a.	n.a.	n.a.	n.a.	0.00	0.00
32.152	13.430	0.481	3933.3	2863.0	8.008	4.199	3.16		Clay	55.7			12.69	0.92	n.a.	n.a.	0.86	0.475	n.a.	n.a.	n.a.	n.a.	0.00	0.00
32.316	12.810	0.444	3953.0	2872.4	7.543	4.095	3.17		Clay	56.4			12.11	0.92	n.a.	n.a.	0.86	0.475	n.a.	n.a.	n.a.	n.a.	0.00	0.00
32.480	11.200	0.379	3972.6	2881.9	6.394	4.110	3.23		Clay	59.2			10.59	0.92	n.a.	n.a.	0.86	0.475	n.a.	n.a.	n.a.	n.a.	0.00	0.00
32.644	10.870	0.269	3992.3	2891.3	6.138	3.028	3.18		Clay	56.5			10.27	0.92	n.a.	n.a.	0.86	0.474	n.a.	n.a.	n.a.	n.a.	0.00	0.00
32.808	9.860	0.205	4012.0	2900.8	5.415	2.605	3.19		Clay	57.1			9.32	0.92	n.a.	n.a.	0.86	0.474	n.a.	n.a.	n.a.	n.a.	0.00	0.00
32.972	8.340	0.163	4031.7	2910.2	4.346	2.576	3.27		Clay	60.9			7.88	0.92	n.a.	n.a.	0.86	0.474	n.a.	n.a.	n.a.	n.a.	0.00	0.00
33.136	7.950	0.168	4051.4	2919.7	4.058	2.831	3.31		Clay	63.9			7.51	0.92	n.a.	n.a.	0.85	0.474	n.a.	n.a.	n.a.	n.a.	0.00	0.00
33.301	8.690	0.209	4071.1	2929.1	4.544	3.138	3.30		Clay	62.2			8.21	0.92	n.a.	n.a.	0.85	0.474	n.a.	n.a.	n.a.	n.a.	0.00	0.00
33.465	10.350	0.289	4090.7	2938.6	5.652	3.478	3.24		Clay	59.4			9.78	0.92	n.a.	n.a.	0.85	0.474	n.a.	n.a.	n.a.	n.a.	0.00	0.00
33.629	11.520	0.236	4110.4	2948.0	6.421	2.491	3.11		Clay	53.7			10.89	0.92	n.a.	n.a.	0.85	0.474	n.a.	n.a.	n.a.	n.a.	0.00	0.00
33.793	11.730	0.235	4130.1	2957.5	6.536	2.431	3.10		Clay	53.2			11.09	0.92	n.a.	n.a.	0.85	0.474	n.a.	n.a.	n.a.	n.a.	0.00	0.00
33.957	12.590	0.316	4149.8	2966.9	7.088	3.001	3.12		Clay	54.0			11.90	0.91	n.a.	n.a.	0.85	0.474	n.a.	n.a.	n.a.	n.a.	0.00	0.00
34.121	14.680	0.232	4169.5	2976.4	8.464	1.841	2.94		Clay	46.4			13.88	0.91	n.a.	n.a.	0.85	0.473	n.a.	n.a.	n.a.	n.a.	0.00	0.00
34.285	15.600	0.157	4189.2	2985.8	9.046	1.164	2.82		Clay	41.6			14.74	0.91	n.a.	n.a.	0.85	0.473	n.a.	n.a.	n.a.	n.a.	0.00	0.00
34.449	12.530	0.575	4208.9	2995.3	6.961	5.511	3.28		Clay	61.4			11.84	0.91	n.a.	n.a.	0.85	0.473	n.a.	n.a.	n.a.	n.a.	0.00	0.00
34.613	22.220	0.831	4228.5	3004.7	13.383	4.135	2.98		Clay	47.8			21.00	0.91	n.a.	n.a.	0.85	0.473	n.a.	n.a.	n.a.	n.a.	0.00	0.00
34.777	51.390	1.060	4248.2	3014.1	39.015	2.152	2.44		Sand	28.4	65.07	1.8	117.13	0.87	102.40	164.83	0.84	0.473	0.935	0.361	0.396	0.84	0.01	0.02
34.941	68.840	0.829	4267.9	3023.6	52.744	1.242	2.19		Sand	21.4		1.8	117.12	0.87	101.83	157.02	0.84	0.473	0.939	0.308	0.338	0.72	0.02	0.03
35.105	62.820	0.629	4287.6	3033.0	47.902	1.037	2.17		Sand	21.1	65.07	1.8	117.13	0.87	101.67	156.32	0.84	0.473	0.939	0.304	0.334	0.71	0.02	0.03
35.269	44.110	0.681	4307.3	3042.5	33.072	1.623	2.42		Sand	27.8	65.07	1.8	117.13	0.87	101.99	163.94	0.84	0.472	0.934	0.354	0.387	0.82	0.01	0.02
35.433	22.470	0.739	4327.0	3051.9	13.307	3.639	2.95		Clay	46.4			21.24	0.91	n.a.	n.a.	0.84	0.472	n.a.	n.a.	n.a.	n.a.	0.00	0.00
35.597	14.130	0.634	4346.7	3061.4	7.811	5.306	3.23		Clay	59.0			13.36	0.91	n.a.	n.a.	0.84	0.472	n.a.	n.a.	n.a.	n.a.	0.00	0.00
35.761	11.910	0.421	4366.3	3070.8	6.335	4.332	3.25		Clay	60.0			11.26	0.91	n.a.	n.a.	0.84	0.472	n.a.	n.a.	n.a.	n.a.	0.00	0.00
35.925	11.130	0.358	4386.0	3080.3	5.803	4.010	3.26		Clay	60.6			10.52	0.91	n.a.	n.a.	0.84	0.472	n.a.	n.a.	n.a.	n.a.	0.00	0.00
36.089	11.170	0.304	4405.7	3089.7	5.804	3.389	3.22		Clay	58.7			10.56	0.90	n.a.	n.a.	0.84	0.472	n.a.	n.a.	n.a.	n.a.	0.00	0.00
36.253	11.430	0.287	4425.4	3099.2	5.948	3.118	3.19		Clay	57.4			10.80	0.90	n.a.	n.a.	0.84	0.471	n.a.	n.a.	n.a.	n.a.	0.00	0.00
36.417	11.900	0.332	4445.1	3108.6	6.226	3.429	3.20		Clay	57.6			11.25	0.90	n.a.	n.a.	0.84	0.471	n.a.	n.a.	n.a.	n.a.	0.00	0.00
36.581	13.250	0.501	4464.8	3118.1	7.067	4.550	3.22		Clay	58.8			12.52	0.90	n.a.	n.a.	0.83	0.471	n.a.	n.a.	n.a.	n.a.	0.00	0.00
36.745	18.740	0.635	4484.4	3127.5	10.550	3.848	3.04		Clay	50.5			17.71	0.90	n.a.	n.a.	0.83	0.471	n.a.	n.a.	n.a.	n.a.	0.00	0.00
36.909	17.690	0.639	4504.1	3137.0	9.843	4.142	3.08		Clay	52.3			16.72	0.90	n.a.	n.a.	0.83	0.471	n.a.	n.a.	n.a.	n.a.	0.00	0.00
37.073	13.050	0.496	4523.8	3146.4	6.857	4.599	3.24		Clay	59.4			12.33	0.90	n.a.	n.a.	0.83	0.471	n.a.	n.a.	n.a.	n.a.	0.00	0.00
37.238	9.250	0.430	4543.5	3155.9	4.422	6.165	3.47		Clay	70.9			8.74	0.90	n.a.	n.a.	0.83	0.470	n.a.	n.a.	n.a.	n.a.	0.00	0.00
37.402	7.120	0.295	4563.2	3165.3	3.057	6.095	3.60		Clay	78.0			6.73	0.90	n.a.	n.a.	0.83	0.470	n.a.	n.a.	n.a.	n.a.	0.00	0.00
37.566	5.710	0.171	4582.9	3174.8	2.154	4.990	3.68		Clay	82.7			5.40	0.90	n.a.	n.a.	0.83	0.470	n.a.	n.a.	n.a.	n.a.	0.00	0.00
37.730	5.470	0.207	4602.6	3184.2	1.990	6.542	3.77		Clay	88.1			5.17	0.90	n.a.	n.a.	0.83	0.470	n.a.	n.a.	n.a.	n.a.	0.00	0.00
37.894	6.520	0.188	4622.2	3193.7	2.636	4.457	3.58		Clay	76.9			6.16	0.90	n.a.	n.a.	0.83	0.469	n.a.	n.a.	n.a.	n.a.	0.00	0.00
38.058	9.090	0.158	4641.9	3203.1	4.227	2.336	3.26		Clay	60.3			8.59	0.90	n.a.	n.a.	0.83	0.469	n.a.	n.a.	n.a.	n.a.	0.00	0.00
38.222	9.730	0.196	4661.6	3212.6	4.606	2.646	3.25		Clay	60.1			9.20	0.90	n.a.	n.a.	0.82	0.469	n.a.	n.a.	n.a.	n.a.	0.00	0.00
38.386	10.960	0.330	4681.3	3222.0	5.350	3.825	3.28		Clay	61.5			10.36	0.89	n.a.	n.a.	0.82	0.469	n.a.	n.a.	n.a.	n.a.	0.00	0.00
38.550	14.290	0.399	4701.0	3231.5	7.390	3.339	3.13		Clay	54.5			13.51	0.89	n.a.	n.a.	0.82	0.469	n.a.	n.a.	n.a.	n.a.	0.00	0.00
38.714	17.450	0.665	4720.7	3240.9	9.312	4.404	3.12		Clay	53.9			16.49	0.89	n.a.	n.a.	0.82	0.468	n.a.	n.a.	n.a.	n.a.	0.00	0.00
38.878	25.900	1.128	4740.4	3250.4	14.478	4.793	2.99		Clay	48.3			24.48	0.89	n.a.	n.a.	0.82	0.468	n.a.	n.a.	n.a.	n.a.	0.00	0.00
39.042	33.500	1.399	4760.0	3259.8	19.093	4.495	2.88		Clay	43.8			31.66	0.89	n.a.	n.a.	0.82	0.468	n.a.	n.a.	n.a.	n.a.	0.00	0.00
39.206	24.830	1.278	4779.7	3269.3	13.728	5.695	3.06		Clay	51.1			23.47	0.89	n.a.	n.a.	0.82	0.468	n.a.	n.a.	n.a.	n.a.	0.00	0.00
39.370	19.550	0.883	4799.4	3278.7	10.462	5.149	3.12		Clay	54.0			18.48	0.89	n.a.	n.a.	0.82	0.467	n.a.	n.a.	n.a.	n.a.	0.00	0.00
39.534	17.150	0.842	4819.1	3288.2	8.966	5.710	3.20		Clay	57.6			16.21	0.89	n.a.	n.a.	0.82	0.467	n.a.	n.a.	n.a.	n.a.	0.00	0.00
39.698	18.070	0.749	4838.8	3297.6	9.492	4.784	3.13		Clay	54.6			17.08	0.89	n.a.	n.a.	0.82	0.467	n.a.	n.a.	n.a.	n.a.	0.00	0.00
39.862	15.700	0.608	4858.5	3307.1	8.026	4.578	3.18		Clay	56.7			14.84	0.89	n.a.	n.a.	0.82	0.467	n.a.	n.a.	n.a.	n.a.	0.00	0.00
40.026	13.290	0.401	4878.1	3316.5	6.544	3.696	3.20		Clay	57.6			12.56	0.89	n.a.	n.a.	0.81	0.466	n.a.	n.a.	n.a.	n.a.	0.00	0.00
40.190	12.000	0.287	4897.8	3326.0	5.743	3.002	3.20		Clay	57.5			11.34	0.89	n.a.	n.a.	0.81	0.466	n.a.	n.a.	n.a.	n.a.	0.00	0.00
40.354	11.480	0.244	4917.5	3335.4	5.409	2.701	3.20		Clay	57.5			10.85	0.89	n.a.	n.a.	0.81	0.466	n.a.	n.a.	n.a.	n.a.	0.00	0.00
40.518	11.780	0.214	4937.2	3344.9	5.568	2.300	3.15		Clay	55.3			11.13	0.89	n.a.	n.a.	0.81	0.466	n.a.	n.a.	n.a.	n.a.	0.00	0.00
40.682	11.540	0.222	4956.9	3354.3	5.403	2.450	3.18		Clay	56.5			10.93	0.89	n.a.	n.a.	0.81	0.465	n.a.	n.a.	n.a.	n.a.	0.00	0.00

CPT No. 1

PGA ( $A_{max}$ ) 0.50

Total Settlement: 0.33 (Inches)

Depth (ft)	$q_c$ (tsf)	$f_s$ (tsf)	$\sigma_{vc}$ (psf)	Insitu $\sigma'_{vc}$ (psf)	Q	F (%)	$l_c$	Layer "Plastic" $PI > 7$	Flag Soil Type	Fines (%)	$q_{c-N}$ near interfaces (soft layer)	Thin Layer Factor ( $K_{t1}$ )	Interpreted $q_{c-N}$	$C_N$	$q_{c1N}$	$q_{c1N-CS}$	Stress Reduction Coeff. $r_d$	CSR	$K_{\sigma}$ for Sand	$CRR_{M=7.5}$ $r'_{vc} = 1 \text{ atm}$	CRR	Factor of Safety (CRR/CSR)	Vertical Strain $\epsilon_v$	Settlement (Inches)
42.159	20.380	0.319	5134.1	3439.3	10.358	1.791	2.86		Clay	43.1			19.26	0.88	n.a.	n.a.	0.80	0.463	n.a.	n.a.	n.a.	n.a.	0.00	0.00
42.323	16.070	0.488	5153.7	3448.8	7.825	3.617	3.13		Clay	54.4			15.19	0.88	n.a.	n.a.	0.80	0.463	n.a.	n.a.	n.a.	n.a.	0.00	0.00
42.487	17.420	0.424	5173.4	3458.2	8.579	2.860	3.04		Clay	50.4			16.47	0.88	n.a.	n.a.	0.80	0.462	n.a.	n.a.	n.a.	n.a.	0.00	0.00
42.651	19.210	0.507	5193.1	3467.7	9.582	3.054	3.02		Clay	49.4			18.16	0.88	n.a.	n.a.	0.80	0.462	n.a.	n.a.	n.a.	n.a.	0.00	0.00
42.815	17.580	0.514	5212.8	3477.1	8.613	3.433	3.08		Clay	52.3			16.62	0.88	n.a.	n.a.	0.80	0.462	n.a.	n.a.	n.a.	n.a.	0.00	0.00
42.979	17.190	0.479	5232.5	3486.6	8.360	3.285	3.08		Clay	50.4			16.25	0.88	n.a.	n.a.	0.80	0.461	n.a.	n.a.	n.a.	n.a.	0.00	0.00
43.143	16.580	0.421	5252.2	3496.0	7.983	3.019	3.08		Clay	52.1			15.67	0.88	n.a.	n.a.	0.80	0.461	n.a.	n.a.	n.a.	n.a.	0.00	0.00
43.307	15.110	0.480	5271.9	3505.5	7.117	3.851	3.18		Clay	56.7			14.28	0.88	n.a.	n.a.	0.80	0.461	n.a.	n.a.	n.a.	n.a.	0.00	0.00
43.471	14.210	0.523	5291.5	3514.9	6.580	4.521	3.25		Clay	59.9			13.43	0.87	n.a.	n.a.	0.79	0.461	n.a.	n.a.	n.a.	n.a.	0.00	0.00
43.635	14.440	0.585	5311.2	3524.4	6.687	4.964	3.27		Clay	60.7			13.65	0.87	n.a.	n.a.	0.79	0.460	n.a.	n.a.	n.a.	n.a.	0.00	0.00
43.799	16.050	0.537	5330.9	3533.8	7.575	4.013	3.17		Clay	56.1			15.17	0.87	n.a.	n.a.	0.79	0.460	n.a.	n.a.	n.a.	n.a.	0.00	0.00
43.963	14.570	0.455	5350.6	3543.3	6.714	3.821	3.20		Clay	57.6			13.77	0.87	n.a.	n.a.	0.79	0.460	n.a.	n.a.	n.a.	n.a.	0.00	0.00
44.127	13.710	0.431	5370.3	3552.7	6.206	3.912	3.23		Clay	59.2			12.96	0.87	n.a.	n.a.	0.79	0.459	n.a.	n.a.	n.a.	n.a.	0.00	0.00
44.291	14.850	0.420	5390.0	3562.2	6.824	3.452	3.17		Clay	56.2			14.04	0.87	n.a.	n.a.	0.79	0.459	n.a.	n.a.	n.a.	n.a.	0.00	0.00
44.455	14.830	0.471	5409.6	3571.6	6.790	3.888	3.20		Clay	57.6			14.02	0.87	n.a.	n.a.	0.79	0.459	n.a.	n.a.	n.a.	n.a.	0.00	0.00
44.619	15.900	0.431	5429.3	3581.1	7.364	3.270	3.13		Clay	54.3			15.03	0.87	n.a.	n.a.	0.79	0.458	n.a.	n.a.	n.a.	n.a.	0.00	0.00
44.783	15.260	0.437	5449.0	3590.5	6.983	3.488	3.16		Clay	55.9			14.42	0.87	n.a.	n.a.	0.79	0.458	n.a.	n.a.	n.a.	n.a.	0.00	0.00
44.948	13.220	0.471	5468.7	3600.0	5.825	4.490	3.29		Clay	61.9			12.50	0.87	n.a.	n.a.	0.79	0.458	n.a.	n.a.	n.a.	n.a.	0.00	0.00
45.112	14.970	0.709	5488.4	3609.4	6.774	5.796	3.30		Clay	62.5			14.15	0.87	n.a.	n.a.	0.78	0.457	n.a.	n.a.	n.a.	n.a.	0.00	0.00
45.276	18.440	0.970	5508.1	3618.9	8.669	6.185	3.23		Clay	59.2			17.43	0.87	n.a.	n.a.	0.78	0.457	n.a.	n.a.	n.a.	n.a.	0.00	0.00
45.440	19.320	1.034	5527.8	3628.3	9.126	6.244	3.22		Clay	58.5			18.26	0.87	n.a.	n.a.	0.78	0.457	n.a.	n.a.	n.a.	n.a.	0.00	0.00
45.604	18.570	0.998	5547.4	3637.8	8.685	6.316	3.24		Clay	59.4			17.55	0.87	n.a.	n.a.	0.78	0.457	n.a.	n.a.	n.a.	n.a.	0.00	0.00
45.768	17.970	0.925	5567.1	3647.2	8.328	6.090	3.24		Clay	59.7			16.98	0.87	n.a.	n.a.	0.78	0.456	n.a.	n.a.	n.a.	n.a.	0.00	0.00
45.932	17.000	0.826	5586.8	3656.7	7.770	5.816	3.25		Clay	60.2			16.07	0.87	n.a.	n.a.	0.78	0.456	n.a.	n.a.	n.a.	n.a.	0.00	0.00
46.096	18.080	0.757	5606.5	3666.1	8.334	4.953	3.19		Clay	57.1			17.09	0.87	n.a.	n.a.	0.78	0.456	n.a.	n.a.	n.a.	n.a.	0.00	0.00
46.260	17.970	0.707	5626.2	3675.6	8.247	4.667	3.18		Clay	56.5			16.98	0.86	n.a.	n.a.	0.78	0.455	n.a.	n.a.	n.a.	n.a.	0.00	0.00
46.424	18.730	0.657	5645.9	3685.0	8.633	4.130	3.13		Clay	54.4			17.70	0.86	n.a.	n.a.	0.78	0.455	n.a.	n.a.	n.a.	n.a.	0.00	0.00
46.588	21.230	0.748	5665.6	3694.5	9.959	4.064	3.07		Clay	51.9			20.07	0.86	n.a.	n.a.	0.78	0.455	n.a.	n.a.	n.a.	n.a.	0.00	0.00
46.752	24.800	0.827	5685.2	3703.9	11.856	3.767	2.99		Clay	48.5			23.44	0.86	n.a.	n.a.	0.78	0.454	n.a.	n.a.	n.a.	n.a.	0.00	0.00
46.916	25.990	0.869	5704.9	3713.4	12.462	3.755	2.98		Clay	47.7			24.57	0.86	n.a.	n.a.	0.77	0.454	n.a.	n.a.	n.a.	n.a.	0.00	0.00
47.080	24.620	0.886	5724.6	3722.8	11.689	4.070	3.02		Clay	49.5			23.27	0.86	n.a.	n.a.	0.77	0.454	n.a.	n.a.	n.a.	n.a.	0.00	0.00
47.244	22.510	0.904	5744.3	3732.3	10.523	4.604	3.09		Clay	52.5			21.28	0.86	n.a.	n.a.	0.77	0.453	n.a.	n.a.	n.a.	n.a.	0.00	0.00
47.408	21.370	0.903	5764.0	3741.7	9.882	4.884	3.13		Clay	54.2			20.20	0.86	n.a.	n.a.	0.77	0.453	n.a.	n.a.	n.a.	n.a.	0.00	0.00
47.572	21.010	0.867	5783.7	3751.2	9.660	4.787	3.13		Clay	54.3			19.86	0.86	n.a.	n.a.	0.77	0.453	n.a.	n.a.	n.a.	n.a.	0.00	0.00
47.736	22.020	0.893	5803.3	3760.6	10.168	4.668	3.10		Clay	53.2			20.81	0.86	n.a.	n.a.	0.77	0.452	n.a.	n.a.	n.a.	n.a.	0.00	0.00
47.900	23.840	0.944	5823.0	3770.1	11.102	4.510	3.06		Clay	51.5			22.53	0.86	n.a.	n.a.	0.77	0.452	n.a.	n.a.	n.a.	n.a.	0.00	0.00
48.064	23.860	0.956	5842.7	3779.5	11.080	4.567	3.07		Clay	51.7			22.55	0.86	n.a.	n.a.	0.77	0.451	n.a.	n.a.	n.a.	n.a.	0.00	0.00
48.228	23.670	0.997	5862.4	3789.0	10.947	4.809	3.09		Clay	52.5			22.37	0.86	n.a.	n.a.	0.77	0.451	n.a.	n.a.	n.a.	n.a.	0.00	0.00
48.392	23.080	1.042	5882.1	3798.4	10.604	5.175	3.12		Clay	53.8			21.81	0.86	n.a.	n.a.	0.77	0.451	n.a.	n.a.	n.a.	n.a.	0.00	0.00
48.556	20.740	0.900	5901.8	3807.9	9.343	5.060	3.15		Clay	55.5			19.60	0.86	n.a.	n.a.	0.77	0.450	n.a.	n.a.	n.a.	n.a.	0.00	0.00
48.720	16.530	0.772	5921.5	3817.3	7.109	5.687	3.28		Clay	61.4			15.62	0.86	n.a.	n.a.	0.76	0.450	n.a.	n.a.	n.a.	n.a.	0.00	0.00
48.885	16.920	0.667	5941.1	3826.7	7.290	4.780	3.23		Clay	58.8			15.99	0.86	n.a.	n.a.	0.76	0.450	n.a.	n.a.	n.a.	n.a.	0.00	0.00
49.049	19.370	0.808	5960.8	3836.2	8.545	4.929	3.18		Clay	56.6			18.31	0.85	n.a.	n.a.	0.76	0.449	n.a.	n.a.	n.a.	n.a.	0.00	0.00
49.213	20.470	0.899	5980.5	3845.6	9.091	5.140	3.17		Clay	56.1			19.35	0.85	n.a.	n.a.	0.76	0.449	n.a.	n.a.	n.a.	n.a.	0.00	0.00
49.377	25.540	1.221	6000.2	3855.1	11.694	5.416	3.10		Clay	52.9			24.14	0.85	n.a.	n.a.	0.76	0.449	n.a.	n.a.	n.a.	n.a.	0.00	0.00
49.541	30.440	1.547	6019.9	3864.5	14.196	5.640	3.04		Clay	50.5			28.77	0.85	n.a.	n.a.	0.76	0.448	n.a.	n.a.	n.a.	n.a.	0.00	0.00
49.705	29.520	1.545	6039.6	3874.0	13.681	5.829	3.06		Clay	51.5			27.90	0.85	n.a.	n.a.	0.76	0.448	n.a.	n.a.	n.a.	n.a.	0.00	0.00
49.869	24.720	1.306	6059.3	3883.4	11.171	6.023	3.14		Clay	54.9			23.36	0.85	n.a.	n.a.	0.76	0.448	n.a.	n.a.	n.a.	n.a.	0.00	0.00
50.033	20.710	0.988	6078.9	3892.9	9.078	5.588	3.19		Clay	57.2			19.57	0.85	n.a.	n.a.	0.76	0.447	n.a.	n.a.	n.a.	n.a.	0.00	0.00
50.197	18.310	0.798	6098.6	3902.3	7.821	5.227	3.22		Clay	58.8			17.31	0.85	n.a.	n.a.	0.76	0.447	n.a.	n.a.	n.a.	n.a.	0.00	0.00
50.361	17.240	0.735	6118.3	3911.8	7.250	5.181	3.25		Clay	59.9			16.29	0.85	n.a.	n.a.	0.76	0.447	n.a.	n.a.	n.a.	n.a.	0.00	0.00
50.525	17.140	0.761	6138.0	3921.2	7.177	5.409	3.26		Clay	60.6			16.20	0.85	n.a.	n.a.	0.75	0.446	n.a.	n.a.	n.a.	n.a.	0.00	0.00
50.689	16.960	0.791	6157.7	3930.7	7.063	5.695	3.28		Clay	61.5			16.03	0.85	n.a.	n.a.	0.75	0.446	n.a.	n.a.	n.a.	n.a.	0.00	0.00
50.853	16.010	0.747	6177.4	3940.1	6.559	5.783	3.31		Clay	63.0			15.13	0.85	n.a.	n.a.	0.75	0.445	n.a.	n.a.	n.a.	n.a.	0.00	0.00
51.017	15.130	0.662	6197.0	3949.6	6.093	5.501	3.32		Clay	63.6			14.30	0.85	n.a.	n.a.	0.75	0.445	n.a.	n.a.	n.a.	n.a.	0.00	0.00
51.181	14.220	0.561	6216.7	3959.0	5.613	5.052	3.33		Clay	64.0			13.44	0.85	n.a.	n.a.	0.75	0.445	n.a.	n.a.	n.a.	n.a.	0.00	0.00
51.345	13.930	0.422	6236.4	3968.5	5.449	3.907	3.28		Clay	61.4														

Depth (ft)	q <sub>c</sub> (tsf)	f <sub>s</sub> (tsf)	σ <sub>vc</sub> (psf)	In situ σ'vc (psf)	Q	F (%)	lc	Layer "Plastic" PI > 7	Flag Soil Type	Fines (%)	q <sub>c</sub> N near interfaces (soft layer)	Thin Layer Factor (K <sub>tl</sub> )	Interpreted q <sub>c</sub> N	C <sub>N</sub>	q <sub>c</sub> 1N	q <sub>c</sub> 1N-CS	Stress Reduction Coeff. r <sub>d</sub>	CSR	K <sub>σ</sub> for Sand	CRRM=7.5, σ'vc = 1 atm	CRR	Factor of Safety (CRR/CSSR)	Vertical Strain ε <sub>v</sub>	Settlement (Inches)
52.657	16.590	0.396	6393.9	4044.1	6.624	2.960	3.14		Clay	55.0			15.68	0.84	n.a.	n.a.	0.74	0.441	n.a.	n.a.	n.a.	n.a.	0.00	0.00
52.822	17.330	0.429	6413.6	4053.5	6.968	3.035	3.13		Clay	54.4			16.38	0.84	n.a.	n.a.	0.74	0.441	n.a.	n.a.	n.a.	n.a.	0.00	0.00
52.986	17.160	0.432	6433.3	4063.0	6.864	3.100	3.14		Clay	54.9			16.22	0.84	n.a.	n.a.	0.74	0.441	n.a.	n.a.	n.a.	n.a.	0.00	0.00
53.150	16.780	0.451	6453.0	4072.4	6.656	3.329	3.17		Clay	56.2			15.86	0.84	n.a.	n.a.	0.74	0.440	n.a.	n.a.	n.a.	n.a.	0.00	0.00
53.314	17.390	0.379	6472.6	4081.9	6.935	2.678	3.10		Clay	53.2			16.44	0.84	n.a.	n.a.	0.74	0.440	n.a.	n.a.	n.a.	n.a.	0.00	0.00
53.478	15.890	0.392	6492.3	4091.3	6.181	3.096	3.18		Clay	56.6			15.02	0.84	n.a.	n.a.	0.74	0.440	n.a.	n.a.	n.a.	n.a.	0.00	0.00
53.642	15.410	0.359	6512.0	4100.8	5.928	2.952	3.18		Clay	56.8			14.57	0.84	n.a.	n.a.	0.74	0.439	n.a.	n.a.	n.a.	n.a.	0.00	0.00
53.806	14.640	0.377	6531.7	4110.2	5.535	3.311	3.23		Clay	59.3			13.84	0.84	n.a.	n.a.	0.74	0.439	n.a.	n.a.	n.a.	n.a.	0.00	0.00
53.970	14.760	0.418	6551.4	4119.7	5.575	3.642	3.25		Clay	60.2			13.95	0.84	n.a.	n.a.	0.74	0.438	n.a.	n.a.	n.a.	n.a.	0.00	0.00
54.134	15.620	0.441	6571.1	4129.1	5.974	3.579	3.23		Clay	58.8			14.76	0.84	n.a.	n.a.	0.73	0.438	n.a.	n.a.	n.a.	n.a.	0.00	0.00
54.298	15.910	0.406	6590.7	4138.6	6.096	3.219	3.19		Clay	57.3			15.04	0.84	n.a.	n.a.	0.73	0.438	n.a.	n.a.	n.a.	n.a.	0.00	0.00
54.462	15.460	0.349	6610.4	4148.0	5.861	2.875	3.18		Clay	56.7			14.61	0.84	n.a.	n.a.	0.73	0.437	n.a.	n.a.	n.a.	n.a.	0.00	0.00
54.626	15.160	0.390	6630.1	4157.5	5.698	3.294	3.22		Clay	58.7			14.33	0.84	n.a.	n.a.	0.73	0.437	n.a.	n.a.	n.a.	n.a.	0.00	0.00
54.790	17.100	0.375	6649.8	4166.9	6.612	2.722	3.12		Clay	54.1			16.16	0.84	n.a.	n.a.	0.73	0.437	n.a.	n.a.	n.a.	n.a.	0.00	0.00
54.954	16.860	0.325	6669.5	4176.4	6.477	2.399	3.10		Clay	53.2			15.94	0.84	n.a.	n.a.	0.73	0.436	n.a.	n.a.	n.a.	n.a.	0.00	0.00
55.118	15.240	0.309	6689.2	4185.8	5.684	2.597	3.17		Clay	56.2			14.40	0.84	n.a.	n.a.	0.73	0.436	n.a.	n.a.	n.a.	n.a.	0.00	0.00
55.282	15.370	0.308	6708.9	4195.3	5.728	2.566	3.16		Clay	55.9			14.53	0.83	n.a.	n.a.	0.73	0.435	n.a.	n.a.	n.a.	n.a.	0.00	0.00
55.446	15.300	0.297	6728.5	4204.7	5.677	2.487	3.16		Clay	55.8			14.46	0.83	n.a.	n.a.	0.73	0.435	n.a.	n.a.	n.a.	n.a.	0.00	0.00
55.610	15.020	0.267	6748.2	4214.1	5.527	2.294	3.15		Clay	55.4			14.20	0.83	n.a.	n.a.	0.73	0.435	n.a.	n.a.	n.a.	n.a.	0.00	0.00
55.774	14.730	0.215	6767.9	4223.6	5.373	1.891	3.12		Clay	54.0			13.92	0.83	n.a.	n.a.	0.73	0.434	n.a.	n.a.	n.a.	n.a.	0.00	0.00
55.938	14.210	0.173	6787.6	4233.0	5.110	1.598	3.11		Clay	53.4			13.43	0.83	n.a.	n.a.	0.72	0.434	n.a.	n.a.	n.a.	n.a.	0.00	0.00
56.102	13.260	0.229	6807.3	4242.5	4.646	2.325	3.22		Clay	58.6			12.53	0.83	n.a.	n.a.	0.72	0.433	n.a.	n.a.	n.a.	n.a.	0.00	0.00
56.266	16.600	0.207	6827.0	4251.9	6.203	1.566	3.03		Clay	49.9			15.69	0.83	n.a.	n.a.	0.72	0.433	n.a.	n.a.	n.a.	n.a.	0.00	0.00
56.430	17.680	0.259	6846.7	4261.4	6.691	1.815	3.03		Clay	50.0			16.71	0.83	n.a.	n.a.	0.72	0.433	n.a.	n.a.	n.a.	n.a.	0.00	0.00
56.594	16.960	0.297	6866.3	4270.8	6.335	2.194	3.09		Clay	52.7			16.03	0.83	n.a.	n.a.	0.72	0.432	n.a.	n.a.	n.a.	n.a.	0.00	0.00
56.759	19.910	0.303	6886.0	4280.3	7.694	1.839	2.98		Clay	47.9			18.82	0.83	n.a.	n.a.	0.72	0.432	n.a.	n.a.	n.a.	n.a.	0.00	0.00
56.923	18.620	0.432	6905.7	4289.7	7.071	2.849	3.11		Clay	53.5			17.60	0.83	n.a.	n.a.	0.72	0.432	n.a.	n.a.	n.a.	n.a.	0.00	0.00
57.087	21.210	1.019	6925.4	4299.2	8.256	5.742	3.23		Clay	59.1			20.05	0.83	n.a.	n.a.	0.72	0.431	n.a.	n.a.	n.a.	n.a.	0.00	0.00
57.251	49.110	1.230	6945.1	4308.6	21.184	2.696	2.71		Clay	37.2			46.42	0.83	n.a.	n.a.	0.72	0.431	n.a.	n.a.	n.a.	n.a.	0.00	0.00
57.415	80.940	1.874	6964.8	4318.1	51.250	2.419	2.38		Sand	26.7	1.78		136.18	0.76	103.98	165.80	0.72	0.430	0.868	0.369	0.375	0.87	0.01	0.00
57.579	68.700	1.869	6984.4	4327.5	30.136	2.866	2.60		Clay	33.7	1.78		115.58	0.83	n.a.	n.a.	0.72	0.430	n.a.	n.a.	n.a.	n.a.	0.00	0.00
57.743	92.250	1.850	7004.1	4337.0	58.592	2.085	2.29		Sand	24.3	1.78		155.20	0.78	120.81	185.69	0.71	0.430	0.839	0.643	0.632	1.47	0.00	0.00
57.907	91.870	1.110	7023.8	4346.4	58.271	1.256	2.16		Sand	20.6	87.19	1.78	155.20	0.77	119.87	178.88	0.71	0.429	0.849	0.518	0.515	1.20	0.01	0.00
58.071	74.130	1.259	7043.5	4355.9	46.515	1.783	2.33		Sand	25.2	87.19	1.78	155.20	0.78	120.73	186.55	0.71	0.429	0.836	0.663	0.649	1.51	0.00	0.00
58.235	38.580	1.249	7063.2	4365.3	16.058	3.565	2.88		Clay	43.6			36.47	0.83	n.a.	n.a.	0.71	0.429	n.a.	n.a.	n.a.	n.a.	0.00	0.00
58.399	25.140	0.873	7082.9	4374.8	9.874	4.042	3.08		Clay	52.0			23.76	0.83	n.a.	n.a.	0.71	0.428	n.a.	n.a.	n.a.	n.a.	0.00	0.00
58.563	21.900	0.663	7102.6	4384.2	8.370	3.614	3.11		Clay	53.3			20.70	0.83	n.a.	n.a.	0.71	0.428	n.a.	n.a.	n.a.	n.a.	0.00	0.00
58.727	22.660	0.625	7122.2	4393.7	8.694	3.270	3.07		Clay	51.6			21.42	0.82	n.a.	n.a.	0.71	0.427	n.a.	n.a.	n.a.	n.a.	0.00	0.00
58.891	23.310	0.717	7141.9	4403.1	8.966	3.633	3.08		Clay	52.3			22.03	0.82	n.a.	n.a.	0.71	0.427	n.a.	n.a.	n.a.	n.a.	0.00	0.00
59.055	24.450	0.846	7161.6	4412.6	9.459	4.053	3.09		Clay	52.7			23.11	0.82	n.a.	n.a.	0.71	0.427	n.a.	n.a.	n.a.	n.a.	0.00	0.00
59.219	25.230	0.930	7181.3	4422.0	9.787	4.298	3.10		Clay	52.8			23.85	0.82	n.a.	n.a.	0.71	0.426	n.a.	n.a.	n.a.	n.a.	0.00	0.00
59.383	23.750	0.962	7201.0	4431.5	9.094	4.775	3.15		Clay	55.2			22.45	0.82	n.a.	n.a.	0.71	0.426	n.a.	n.a.	n.a.	n.a.	0.00	0.00
59.547	21.900	0.767	7220.7	4440.9	8.237	4.193	3.15		Clay	55.3			20.70	0.82	n.a.	n.a.	0.71	0.425	n.a.	n.a.	n.a.	n.a.	0.00	0.00
59.711	19.630	0.654	7240.4	4450.4	7.195	4.083	3.19		Clay	57.2			18.55	0.82	n.a.	n.a.	0.70	0.425	n.a.	n.a.	n.a.	n.a.	0.00	0.00
59.875	18.640	0.510	7260.0	4459.8	6.731	3.398	3.17		Clay	56.2			17.62	0.82	n.a.	n.a.	0.70	0.425	n.a.	n.a.	n.a.	n.a.	0.00	0.00
60.039	17.490	0.381	7279.7	4469.3	6.198	2.752	3.15		Clay	55.3			16.53	0.82	n.a.	n.a.	0.70	0.424	n.a.	n.a.	n.a.	n.a.	0.00	0.00
60.203	16.500	0.330	7299.4	4478.7	5.738	2.568	3.16		Clay	55.9			15.60	0.82	n.a.	n.a.	0.70	0.424	n.a.	n.a.	n.a.	n.a.	0.00	0.00
60.367	17.770	0.336	7319.1	4488.2	6.288	2.378	3.11		Clay	53.6			16.80	0.82	n.a.	n.a.	0.70	0.424	n.a.	n.a.	n.a.	n.a.	0.00	0.00
60.531	18.560	0.390	7338.8	4497.6	6.622	2.621	3.11		Clay	53.7			17.54	0.82	n.a.	n.a.	0.70	0.423	n.a.	n.a.	n.a.	n.a.	0.00	0.00
60.696	19.640	0.771	7358.5	4507.1	7.083	4.832	3.24		Clay	59.4			18.56	0.82	n.a.	n.a.	0.70	0.423	n.a.	n.a.	n.a.	n.a.	0.00	0.00
60.860	28.200	1.110	7378.1	4516.5	10.854	4.529	3.07		Clay	51.9			26.65	0.82	n.a.	n.a.	0.70	0.422	n.a.	n.a.	n.a.	n.a.	0.00	0.00
61.024	31.970	1.094	7397.8	4526.0	12.493	3.871	2.98		Clay	48.0			30.22	0.82	n.a.	n.a.	0.70	0.422	n.a.	n.a.	n.a.	n.a.	0.00	0.00
61.188	29.910	0.785	7417.5	4535.4	11.554	2.996	2.95		Clay	46.4			32.27	0.82	n.a.	n.a.	0.70	0.422	n.a.	n.a.	n.a.	n.a.	0.00	0.00
61.352	20.790	0.651	7437.2	4544.9	7.512	3.811	3.16		Clay	55.7			19.65	0.82	n.a.	n.a.	0.70	0.421	n.a.	n.a.	n.a.	n.a.	0.00	0.00
61.516	18.560	0.431	7456.9	4554.3	6.513	2.907	3.14		Clay	55.1			17.54	0.82	n.a.	n.a.	0.70	0.421	n.a.	n.a.	n.a.	n.a.	0.00	0.00
61.680	17.280	0.346	7476.6	4563.8	5.934	2.551	3.15		Clay	55.3			16.33	0.82	n.a.	n.a.	0.69	0.420	n.a.	n.a.	n.a.	n.a.	0.00	0.00

Depth (ft)	q <sub>c</sub> (tsf)	f <sub>s</sub> (tsf)	σ <sub>vc</sub> (psf)	Insitu σ'vc (psf)	Q	F (%)	lc	Layer "Plastic" PI > 7	Flag Soil Type	Fines (%)	Qc-N near interfaces (soft layer)	Thin Layer Factor (K <sub>tl</sub> )	Interpreted q <sub>cN</sub>	C <sub>N</sub>	q <sub>c1N</sub>	q <sub>c1N-CS</sub>	Stress Reduction Coeff. r <sub>d</sub>	CSR	K <sub>σ</sub> for Sand	CRRM=7.5, σ'vc = 1 atm	CRR	Factor of Safety (CRR/CSR)	Vertical Strain ε <sub>v</sub>	Settlement (Inches)
63.156	18.410	0.331	7653.7	4648.8	6.274	2.268	3.10		Clay	53.2			17.40	0.81	n.a.	n.a.	0.69	0.417	n.a.	n.a.	n.a.	n.a.	0.00	0.00
63.320	16.720	0.382	7673.4	4658.2	5.531	2.965	3.21		Clay	58.1			15.80	0.81	n.a.	n.a.	0.69	0.417	n.a.	n.a.	n.a.	n.a.	0.00	0.00
63.484	16.670	0.432	7693.1	4667.7	5.495	3.368	3.24		Clay	59.6			15.76	0.81	n.a.	n.a.	0.69	0.416	n.a.	n.a.	n.a.	n.a.	0.00	0.00
63.648	17.260	0.538	7712.8	4677.1	5.732	4.010	3.27		Clay	60.8			16.31	0.81	n.a.	n.a.	0.68	0.416	n.a.	n.a.	n.a.	n.a.	0.00	0.00
63.812	17.540	0.562	7732.5	4686.6	5.835	4.106	3.27		Clay	60.8			16.58	0.81	n.a.	n.a.	0.68	0.415	n.a.	n.a.	n.a.	n.a.	0.00	0.00
63.976	17.600	0.565	7752.2	4696.0	5.845	4.115	3.27		Clay	60.8			16.64	0.81	n.a.	n.a.	0.68	0.415	n.a.	n.a.	n.a.	n.a.	0.00	0.00
64.140	17.810	0.588	7771.9	4705.5	5.918	4.221	3.27		Clay	60.9			16.83	0.81	n.a.	n.a.	0.68	0.415	n.a.	n.a.	n.a.	n.a.	0.00	0.00
64.304	18.220	0.599	7791.5	4714.9	6.076	4.181	3.26		Clay	60.3			17.22	0.81	n.a.	n.a.	0.68	0.414	n.a.	n.a.	n.a.	n.a.	0.00	0.00
64.469	18.610	0.619	7811.2	4724.4	6.225	4.210	3.25		Clay	60.0			17.59	0.81	n.a.	n.a.	0.68	0.414	n.a.	n.a.	n.a.	n.a.	0.00	0.00
64.633	18.830	0.623	7830.9	4733.8	6.301	4.178	3.24		Clay	59.7			17.80	0.81	n.a.	n.a.	0.68	0.414	n.a.	n.a.	n.a.	n.a.	0.00	0.00
64.797	18.770	0.569	7850.6	4743.3	6.259	3.835	3.23		Clay	58.8			17.74	0.81	n.a.	n.a.	0.68	0.413	n.a.	n.a.	n.a.	n.a.	0.00	0.00
64.961	18.100	0.518	7870.3	4752.7	5.961	3.660	3.23		Clay	59.1			17.11	0.81	n.a.	n.a.	0.68	0.413	n.a.	n.a.	n.a.	n.a.	0.00	0.00
65.125	19.020	0.570	7890.0	4762.2	6.331	3.778	3.22		Clay	58.4			17.98	0.81	n.a.	n.a.	0.68	0.412	n.a.	n.a.	n.a.	n.a.	0.00	0.00
65.289	19.860	0.574	7909.6	4771.6	6.667	3.609	3.19		Clay	57.0			18.77	0.81	n.a.	n.a.	0.68	0.412	n.a.	n.a.	n.a.	n.a.	0.00	0.00
65.453	19.590	0.610	7929.3	4781.1	6.536	3.901	3.21		Clay	58.3			18.52	0.81	n.a.	n.a.	0.68	0.412	n.a.	n.a.	n.a.	n.a.	0.00	0.00
65.617	19.760	0.591	7949.0	4790.5	6.590	3.743	3.20		Clay	57.6			18.68	0.81	n.a.	n.a.	0.68	0.411	n.a.	n.a.	n.a.	n.a.	0.00	0.00
65.781	19.240	0.542	7968.7	4800.0	6.357	3.555	3.20		Clay	57.7			18.19	0.81	n.a.	n.a.	0.67	0.411	n.a.	n.a.	n.a.	n.a.	0.00	0.00
65.945	18.440	0.469	7988.4	4809.4	6.007	3.247	3.20		Clay	57.6			17.43	0.81	n.a.	n.a.	0.67	0.411	n.a.	n.a.	n.a.	n.a.	0.00	0.00
66.109	17.470	0.468	8008.1	4818.9	5.589	3.472	3.24		Clay	59.6			16.51	0.80	n.a.	n.a.	0.67	0.410	n.a.	n.a.	n.a.	n.a.	0.00	0.00
66.273	18.260	0.505	8027.8	4828.3	5.901	3.548	3.23		Clay	58.9			17.26	0.80	n.a.	n.a.	0.67	0.410	n.a.	n.a.	n.a.	n.a.	0.00	0.00
66.437	18.880	0.567	8047.4	4837.8	6.142	3.815	3.23		Clay	59.1			17.84	0.80	n.a.	n.a.	0.67	0.409	n.a.	n.a.	n.a.	n.a.	0.00	0.00
66.601	19.140	0.597	8067.1	4847.2	6.233	3.954	3.23		Clay	59.2			18.09	0.80	n.a.	n.a.	0.67	0.409	n.a.	n.a.	n.a.	n.a.	0.00	0.00
66.765	19.870	0.612	8086.8	4856.7	6.517	3.867	3.21		Clay	58.2			18.78	0.80	n.a.	n.a.	0.67	0.409	n.a.	n.a.	n.a.	n.a.	0.00	0.00
66.929	19.560	0.587	8106.5	4866.1	6.373	3.784	3.22		Clay	58.3			18.49	0.80	n.a.	n.a.	0.67	0.408	n.a.	n.a.	n.a.	n.a.	0.00	0.00
67.093	19.530	0.591	8126.2	4875.6	6.345	3.820	3.22		Clay	58.5			18.46	0.80	n.a.	n.a.	0.67	0.408	n.a.	n.a.	n.a.	n.a.	0.00	0.00
67.257	19.940	0.631	8145.9	4885.0	6.496	3.979	3.22		Clay	58.6			18.85	0.80	n.a.	n.a.	0.67	0.408	n.a.	n.a.	n.a.	n.a.	0.00	0.00
67.421	20.750	0.701	8165.6	4894.5	6.811	4.204	3.22		Clay	58.4			19.61	0.80	n.a.	n.a.	0.67	0.407	n.a.	n.a.	n.a.	n.a.	0.00	0.00
67.585	22.530	0.858	8185.2	4903.9	7.519	4.656	3.21		Clay	58.0			21.29	0.80	n.a.	n.a.	0.67	0.407	n.a.	n.a.	n.a.	n.a.	0.00	0.00
67.749	26.120	1.098	8204.9	4913.4	8.962	4.987	3.16		Clay	56.0			24.69	0.80	n.a.	n.a.	0.66	0.406	n.a.	n.a.	n.a.	n.a.	0.00	0.00
67.913	31.210	1.404	8224.6	4922.8	11.009	5.182	3.10		Clay	53.3			29.50	0.80	n.a.	n.a.	0.66	0.406	n.a.	n.a.	n.a.	n.a.	0.00	0.00
68.077	39.250	1.404	8244.3	4932.3	14.244	3.997	2.95		Clay	46.5			37.10	0.80	n.a.	n.a.	0.66	0.406	n.a.	n.a.	n.a.	n.a.	0.00	0.00
68.241	50.710	1.311	8264.0	4941.7	18.851	2.814	2.76		Clay	39.1			47.93	0.80	n.a.	n.a.	0.66	0.405	n.a.	n.a.	n.a.	n.a.	0.00	0.00
68.406	55.980	1.350	8283.7	4951.2	20.940	2.605	2.70		Clay	37.1			52.91	0.80	n.a.	n.a.	0.66	0.405	n.a.	n.a.	n.a.	n.a.	0.00	0.00
68.570	54.700	1.344	8303.3	4960.6	20.380	2.658	2.72		Clay	37.6			51.70	0.80	n.a.	n.a.	0.66	0.405	n.a.	n.a.	n.a.	n.a.	0.00	0.00
68.734	49.150	1.750	8323.0	4970.1	18.104	3.889	2.86		Clay	43.0			46.46	0.80	n.a.	n.a.	0.66	0.404	n.a.	n.a.	n.a.	n.a.	0.00	0.00
68.898	43.810	2.229	8342.7	4979.5	15.921	5.624	3.00		Clay	48.9			41.41	0.80	n.a.	n.a.	0.66	0.404	n.a.	n.a.	n.a.	n.a.	0.00	0.00
69.062	49.390	1.799	8362.4	4989.0	18.124	3.979	2.86		Clay	43.2			46.68	0.80	n.a.	n.a.	0.66	0.403	n.a.	n.a.	n.a.	n.a.	0.00	0.00
69.226	60.130	1.272	8382.1	4998.4	22.383	2.273	2.64		Clay	35.0			56.83	0.80	n.a.	n.a.	0.66	0.403	n.a.	n.a.	n.a.	n.a.	0.00	0.00
69.390	60.160	1.104	8401.8	5007.9	22.349	1.973	2.61		Clay	33.8			56.86	0.80	n.a.	n.a.	0.66	0.403	n.a.	n.a.	n.a.	n.a.	0.00	0.00
69.554	51.610	0.806	8421.5	5017.3	18.894	1.700	2.63		Clay	34.6			48.78	0.80	n.a.	n.a.	0.66	0.402	n.a.	n.a.	n.a.	n.a.	0.00	0.00
69.718	39.260	0.874	8441.1	5026.7	13.941	2.495	2.83		Clay	42.0			37.11	0.80	n.a.	n.a.	0.66	0.402	n.a.	n.a.	n.a.	n.a.	0.00	0.00
69.882	29.670	1.116	8460.8	5036.2	10.103	4.387	3.09		Clay	52.6			28.04	0.80	n.a.	n.a.	0.66	0.402	n.a.	n.a.	n.a.	n.a.	0.00	0.00
70.046	29.290	1.086	8480.5	5045.6	9.929	4.337	3.09		Clay	52.7			27.68	0.80	n.a.	n.a.	0.65	0.401	n.a.	n.a.	n.a.	n.a.	0.00	0.00
70.210	32.130	1.131	8500.2	5055.1	11.030	4.056	3.04		Clay	50.4			30.37	0.79	n.a.	n.a.	0.65	0.401	n.a.	n.a.	n.a.	n.a.	0.00	0.00
70.374	33.020	1.066	8519.9	5064.5	11.357	3.707	3.01		Clay	48.9			31.21	0.79	n.a.	n.a.	0.65	0.401	n.a.	n.a.	n.a.	n.a.	0.00	0.00
70.538	35.520	0.819	8539.6	5074.0	12.318	2.622	2.89		Clay	44.2			33.57	0.79	n.a.	n.a.	0.65	0.400	n.a.	n.a.	n.a.	n.a.	0.00	0.00
70.702	33.600	0.850	8559.3	5083.4	11.536	2.899	2.94		Clay	46.1			31.76	0.79	n.a.	n.a.	0.65	0.400	n.a.	n.a.	n.a.	n.a.	0.00	0.00
70.866	28.220	1.363	8579.9	5092.9	9.398	5.694	3.18		Clay	56.9			26.67	0.79	n.a.	n.a.	0.65	0.399	n.a.	n.a.	n.a.	n.a.	0.00	0.00
71.030	35.810	1.531	8598.6	5102.3	12.351	4.858	3.05		Clay	50.8			33.85	0.79	n.a.	n.a.	0.65	0.399	n.a.	n.a.	n.a.	n.a.	0.00	0.00
71.194	48.960	1.470	8618.3	5111.8	17.470	3.292	2.83		Clay	41.7			46.28	0.79	n.a.	n.a.	0.65	0.399	n.a.	n.a.	n.a.	n.a.	0.00	0.00
71.358	45.360	1.807	8638.0	5121.2	16.028	4.404	2.93		Clay	46.0			42.87	0.79	n.a.	n.a.	0.65	0.398	n.a.	n.a.	n.a.	n.a.	0.00	0.00
71.522	59.540	2.039	8657.7	5130.7	21.522	3.693	2.79		Clay	40.2			56.28	0.79	n.a.	n.a.	0.65	0.398	n.a.	n.a.	n.a.	n.a.	0.00	0.00
71.686	92.190	2.155	8677.4	5140.1	53.276	2.453	2.37		Sand	26.5	123.03		123.03	0.69	84.76	140.18	0.65	0.398	0.870	0.233	0.237	0.60	0.02	0.00
71.850	111.880	2.179	8697.0	5149.6	65.151	2.026	2.25		Sand	23.1	123.03		123.03	0.68	84.20	136.42	0.65	0.397	0.873	0.221	0.226	0.57	0.02	0.00
72.014	114.200	2.444	8716.7	5159.0	66.490	2.225	2.27		Sand	23.7	123.03		123.03	0.68	84.22	137.07	0.65	0.397	0.872	0.223	0.228	0.57	0.02	0.00
72.178	116.780	2.614	8736.4	5168.5	67.983	2.326	2.28		Sand	23.9	123.03		123.03	0.68	84.17	137.18	0.65	0.397	0.872	0.223	0.228	0.58	0.02	0.00



CPT No.

1

PGA ( $A_{max}$ )

0.50

Total Settlement: 0.33 (Inches)

Depth (ft)	$q_c$ (tsf)	$f_s$ (tsf)	$\sigma_{vc}$ (psf)	Insitu $\sigma'_{vc}$ (psf)	Q	F (%)	$l_c$	Layer "Plastic" PI > 7	Flag Soil Type	Fines (%)	$q_c$ -N near interfaces (soft layer)	Thin Layer Factor ( $K_{t1}$ )	Interpreted $q_{cN}$	$C_N$	$q_{c1N}$	$q_{c1N-CS}$	Stress Reduction Coeff. $r_d$	CSR	$K_{cs}$ for Sand	$CRR_{M=7.5}$ $r'_{vc} = 1 \text{ atm}$	CRR	Factor of Safety (CRR/CSR)	Vertical Strain $\epsilon_v$	Settlement (Inches)
73.655	159.080	1.141	8913.6	5253.5	92.752	0.738	1.86		Sand	14.0			150.36	0.68	101.96	136.00	0.64	0.393	0.871	0.220	0.224	0.57	0.02	0.00
73.819	162.790	1.207	8933.3	5263.0	94.886	0.763	1.86		Sand	14.0			153.87	0.68	104.83	139.43	0.64	0.393	0.867	0.230	0.234	0.60	0.02	0.00
73.983	171.030	1.403	8953.0	5272.4	99.729	0.842	1.86		Sand	14.1			161.65	0.69	111.56	148.17	0.64	0.393	0.856	0.263	0.264	0.67	0.02	0.00
74.147	185.580	0.995	8972.6	5281.9	108.338	0.549	1.73		Sand	11.6			175.41	0.69	120.30	144.63	0.64	0.392	0.860	0.249	0.251	0.64	0.02	0.00
74.311	195.470	1.268	8992.3	5291.3	114.147	0.664	1.76		Sand	12.1			184.75	0.70	129.10	157.57	0.64	0.392	0.843	0.311	0.307	0.78	0.01	0.00
74.475	194.240	1.087	9012.0	5300.8	113.305	0.573	1.72		Sand	11.5			183.59	0.69	127.07	151.56	0.64	0.392	0.851	0.279	0.278	0.71	0.02	0.00
74.639	190.800	1.168	9031.7	5310.2	111.146	0.627	1.75		Sand	12.0			180.34	0.69	124.85	152.21	0.63	0.391	0.850	0.282	0.281	0.72	0.02	0.00
74.803	189.920	1.435	9051.4	5319.7	110.516	0.774	1.81		Sand	13.0			179.51	0.70	125.40	158.79	0.63	0.391	0.841	0.318	0.313	0.80	0.01	0.00
74.967	206.010	1.735	9071.1	5329.1	119.995	0.861	1.81		Sand	13.1			194.72	0.71	139.00	174.66	0.63	0.391	0.815	0.460	0.439	1.12	0.01	0.00
75.131	228.770	2.484	9090.7	5338.6	133.427	1.108	1.85		Sand	13.8			216.23	0.74	160.09	203.56	0.63	0.390	0.746	1.349	1.180	3.02	0.00	0.00
75.295	236.930	2.505	9110.4	5348.0	138.155	1.078	1.83		Sand	13.4			223.94	0.75	166.84	209.20	0.63	0.390	0.728	1.814	1.546	3.96	0.00	0.00
75.459	220.210	2.885	9130.1	5357.5	128.095	1.338	1.92		Sand	15.2			208.14	0.74	153.98	203.84	0.63	0.390	0.745	1.368	1.193	3.06	0.00	0.00
75.623	196.900	3.045	9149.8	5366.9	114.142	1.583	2.00		Sand	17.0			186.11	0.73	134.94	188.34	0.63	0.389	0.785	0.706	0.650	1.67	0.00	0.00
75.787	180.920	3.495	9169.5	5376.4	104.560	1.982	2.10		Sand	19.2			171.00	0.72	122.42	179.13	0.63	0.389	0.804	0.522	0.492	1.26	0.00	0.00
75.951	182.270	3.282	9189.2	5385.8	105.263	1.847	2.08		Sand	18.7			172.28	0.71	123.17	178.65	0.63	0.389	0.805	0.514	0.485	1.25	0.00	0.00
76.115	206.650	2.905	9208.9	5395.3	119.596	1.438	1.96		Sand	16.1			195.32	0.73	142.38	193.84	0.63	0.388	0.771	0.872	0.787	2.03	0.00	0.00
76.280	276.270	3.265	9228.5	5404.7	160.659	1.202	1.81		Sand	13.2			261.12	0.78	202.91	249.42	0.63	0.388	0.719	2.000	1.684	4.34	0.00	0.00
76.444	281.080	3.798	9248.2	5414.1	163.355	1.374	1.85		Sand	13.9			265.67	0.78	207.35	259.77	0.63	0.388	0.718	2.000	1.682	4.34	0.00	0.00
76.608	249.240	4.613	9267.9	5423.6	144.409	1.886	1.99		Sand	16.7			235.58	0.77	182.13	245.54	0.63	0.387	0.718	2.000	1.681	4.34	0.00	0.00
76.772	226.520	4.890	9287.6	5433.0	130.876	2.204	2.07		Sand	18.5			214.10	0.76	162.15	227.38	0.63	0.387	0.717	2.000	1.680	4.34	0.00	0.00
76.936	239.470	4.646	9307.3	5442.5	138.389	1.979	2.02		Sand	17.3			226.34	0.77	173.21	237.07	0.63	0.387	0.717	2.000	1.679	4.34	0.00	0.00
77.100	293.660	4.778	9327.0	5451.9	170.172	1.653	1.90		Sand	14.8			277.56	0.78	216.23	276.81	0.62	0.386	0.716	2.000	1.678	4.34	0.00	0.00
77.264	321.270	5.205	9346.7	5461.4	186.263	1.644	1.87		Sand	14.3			303.66	0.78	236.45	297.17	0.62	0.386	0.716	2.000	1.676	4.34	0.00	0.00
77.428	361.780	3.775	9366.3	5470.8	209.909	1.057	1.69		Sand	11.0			341.95	0.78	266.15	301.71	0.62	0.386	0.715	2.000	1.675	4.34	0.00	0.00
77.592	362.410	3.570	9386.0	5480.3	210.092	0.998	1.67		Sand	10.7			342.54	0.78	266.49	298.89	0.62	0.385	0.715	2.000	1.674	4.34	0.00	0.00
77.756	381.070	3.456	9405.7	5489.7	220.855	0.918	1.63		Sand	10.0			360.18	0.78	280.08	306.65	0.62	0.385	0.714	2.000	1.673	4.34	0.00	0.00
77.920	392.270	3.506	9425.4	5499.2	227.226	0.905	1.62		Sand	9.8	459.43		370.77	0.78	288.18	313.12	0.62	0.385	0.713	2.000	1.672	4.34	0.00	0.00
78.084	387.320	3.711	9445.1	5508.6	224.126	0.970	1.65		Sand	10.2			366.09	0.78	284.42	313.50	0.62	0.384	0.713	2.000	1.670	4.35	0.00	0.00
78.248	362.200	3.941	9464.8	5518.1	209.225	1.102	1.71		Sand	11.2			342.34	0.78	265.85	303.90	0.62	0.384	0.712	2.000	1.669	4.35	0.00	0.00
78.412	385.290	4.181	9484.4	5527.5	222.544	1.099	1.69		Sand	10.9			364.17	0.78	282.67	319.07	0.62	0.384	0.712	2.000	1.668	4.35	0.00	0.00
78.576	438.410	3.381	9504.1	5537.0	253.386	0.780	1.54		Sand	8.6			414.38	0.78	321.50	336.05	0.62	0.383	0.711	2.000	1.667	4.35	0.00	0.00
78.740	477.740	3.019	9523.8	5546.4	276.125	0.638	1.45		Sand	7.4			451.55	0.78	350.18	355.90	0.62	0.383	0.711	2.000	1.666	4.35	0.00	0.00
78.904	486.080	3.077	9543.5	5555.9	280.749	0.639	1.45		Sand	7.3			459.43	0.78	356.14	361.57	0.62	0.383	0.710	2.000	1.664	4.35	0.00	0.00
79.068	469.250	5.549	9563.2	5565.3	270.697	1.195	1.66		Sand	10.5	459.43		459.43	0.77	355.98	393.80	0.62	0.382	0.710	2.000	1.663	4.35	0.00	0.00
79.232	406.450	8.551	9582.9	5574.8	233.892	2.129	1.90		Sand	14.9	459.43		459.43	0.77	355.82	444.57	0.62	0.382	0.709	2.000	1.662	4.35	0.00	0.00
79.396	200.190	8.897	9602.6	5584.2	113.682	4.554	2.35		Sand	25.9	459.43		459.43	0.77	355.66	497.60	0.62	0.382	0.709	2.000	1.661	4.35	0.00	0.00
79.560	106.520	7.401	9622.2	5593.7	36.366	7.277	2.82		Clay	41.7			100.68	0.77	n.a.	n.a.	0.62	0.382	n.a.	n.a.	n.a.	n.a.	0.00	0.00
79.724	73.920	3.853	9641.9	5603.1	24.664	5.576	2.86		Clay	43.1			69.87	0.77	n.a.	n.a.	0.61	0.381	n.a.	n.a.	n.a.	n.a.	0.00	0.00
79.888	65.270	2.620	9661.6	5612.6	21.537	4.335	2.83		Clay	41.9			61.69	0.77	n.a.	n.a.	0.61	0.381	n.a.	n.a.	n.a.	n.a.	0.00	0.00
80.052	50.480	2.038	9681.3	5622.0	16.236	4.465	2.93		Clay	45.9			47.71	0.77	n.a.	n.a.	0.61	0.381	n.a.	n.a.	n.a.	n.a.	0.00	0.00
80.217	41.410	1.579	9701.0	5631.5	12.984	4.318	3.00		Clay	48.7			39.14	0.77	n.a.	n.a.	0.61	0.380	n.a.	n.a.	n.a.	n.a.	0.00	0.00
80.381	36.300	1.199	9720.7	5640.9	11.147	3.813	3.02		Clay	49.5			34.31	0.77	n.a.	n.a.	0.61	0.380	n.a.	n.a.	n.a.	n.a.	0.00	0.00
80.545	28.940	0.982	9740.4	5650.4	8.520	4.078	3.13		Clay	54.4			27.35	0.77	n.a.	n.a.	0.61	0.380	n.a.	n.a.	n.a.	n.a.	0.00	0.00
80.709	27.840	0.913	9760.0	5659.8	8.113	3.977	3.14		Clay	54.9			26.31	0.77	n.a.	n.a.	0.61	0.379	n.a.	n.a.	n.a.	n.a.	0.00	0.00
80.873	27.850	0.839	9779.7	5669.3	8.100	3.655	3.12		Clay	54.0			26.32	0.77	n.a.	n.a.	0.61	0.379	n.a.	n.a.	n.a.	n.a.	0.00	0.00
81.037	29.560	0.801	9799.4	5678.7	8.685	3.249	3.07		Clay	51.6			27.94	0.77	n.a.	n.a.	0.61	0.379	n.a.	n.a.	n.a.	n.a.	0.00	0.00
81.201	28.370	0.803	9819.1	5688.2	8.249	3.422	3.10		Clay	53.0			26.81	0.77	n.a.	n.a.	0.61	0.378	n.a.	n.a.	n.a.	n.a.	0.00	0.00
81.365	27.280	0.780	9838.8	5697.6	7.849	3.488	3.12		Clay	54.0			25.78	0.77	n.a.	n.a.	0.61	0.378	n.a.	n.a.	n.a.	n.a.	0.00	0.00
81.529	29.110	0.833	9858.5	5707.1	8.474	3.445	3.09		Clay	52.6			27.51	0.77	n.a.	n.a.	0.61	0.378	n.a.	n.a.	n.a.	n.a.	0.00	0.00
81.693	31.990	0.882	9878.1	5716.5	9.464	3.259	3.04		Clay	50.3			30.24	0.77	n.a.	n.a.	0.61	0.378	n.a.	n.a.	n.a.	n.a.	0.00	0.00
81.857	33.510	0.812	9897.8	5726.0	9.976	2.844	2.98		Clay	48.1			31.67	0.77	n.a.	n.a.	0.61	0.377	n.a.	n.a.	n.a.	n.a.	0.00	0.00
82.021	30.570	0.749	9917.5	5735.4	8.931	2.925																		

Depth (ft)	q <sub>c</sub> (tsf)	f <sub>s</sub> (tsf)	σ <sub>vc</sub> (psf)	In situ σ'vc (psf)	Q	F (%)	lc	Layer "Plastic" PI > 7	Flag Soil Type	Fines (%)	Q <sub>cN</sub> near interfaces (soft layer)	Thin Layer Factor (K <sub>tl</sub> )	Interpreted Q <sub>cN</sub>	C <sub>N</sub>	q <sub>c1N</sub>	q <sub>c1N-CS</sub>	Stress Reduction Coeff. r <sub>d</sub>	CSR	K <sub>σ</sub> for Sand	CRR <sub>M=7.5</sub> σ'vc = 1 atm	CRR	Factor of Safety (CRR/CSR)	Vertical Strain ε <sub>v</sub>	Settlement (Inches)
84.154	74.480	2.944	10173.4	5858.2	23.691	4.243	2.79		Clay	40.5			70.40	0.76	n.a.	n.a.	0.60	0.373	n.a.	n.a.	n.a.	n.a.	0.00	0.00
84.318	114.830	2.493	10193.1	5867.7	62.284	2.272	2.30		Sand	24.4	111.84	1.8	201.31	0.73	147.96	221.55	0.60	0.373	0.694	2.000	1.626	4.36	0.00	0.00
84.482	118.330	1.886	10212.8	5877.1	64.213	1.665	2.20		Sand	21.8		1.8	201.32	0.73	146.83	215.88	0.60	0.373	0.694	2.000	1.625	4.36	0.00	0.00
84.646	105.050	1.625	10232.5	5886.6	56.631	1.626	2.24		Sand	22.7	111.84	1.8	201.31	0.73	147.13	217.88	0.60	0.372	0.693	2.000	1.624	4.36	0.00	0.00
84.810	87.300	1.809	10252.2	5896.0	46.529	2.202	2.39		Sand	26.8	111.84	1.8	201.31	0.74	148.33	224.67	0.60	0.372	0.693	2.000	1.623	4.36	0.00	0.00
84.974	59.880	1.855	10271.9	5905.5	18.540	3.389	2.81		Clay	41.2			56.60	0.76	n.a.	n.a.	0.60	0.372	n.a.	n.a.	n.a.	n.a.	0.00	0.00
85.138	46.400	2.460	10291.5	5914.9	13.949	5.964	3.06		Clay	51.5			43.86	0.76	n.a.	n.a.	0.60	0.371	n.a.	n.a.	n.a.	n.a.	0.00	0.00
85.302	78.450	2.554	10311.2	5924.4	24.743	3.484	2.72		Clay	37.9			74.15	0.76	n.a.	n.a.	0.60	0.371	n.a.	n.a.	n.a.	n.a.	0.00	0.00
85.466	169.350	2.177	10330.9	5933.8	92.669	1.326	2.02		Sand	17.3	188.81	1.53	288.88	0.76	220.08	295.36	0.59	0.371	0.691	2.000	1.618	4.36	0.00	0.00
85.630	197.760	1.838	10350.6	5943.3	108.613	0.954	1.87		Sand	14.2	188.81	1.53	288.88	0.76	219.98	277.39	0.59	0.371	0.690	2.000	1.617	4.36	0.00	0.00
85.794	199.760	1.807	10370.3	5952.7	109.648	0.929	1.86		Sand	14.0		1.53	288.88	0.76	219.89	275.77	0.59	0.370	0.690	2.000	1.616	4.36	0.00	0.00
85.958	199.590	1.460	10390.0	5962.2	109.460	0.751	1.80		Sand	12.9	188.81	1.53	288.88	0.76	219.80	267.37	0.59	0.370	0.689	2.000	1.615	4.36	0.00	0.00
86.122	198.850	1.245	10409.6	5971.6	108.951	0.643	1.76		Sand	12.2	188.81	1.53	288.88	0.76	219.71	261.39	0.59	0.370	0.689	2.000	1.614	4.36	0.00	0.00
86.286	156.670	1.509	10429.3	5981.1	85.147	0.996	1.96		Sand	16.2	188.81	1.53	288.88	0.76	219.62	289.03	0.59	0.370	0.688	2.000	1.612	4.36	0.00	0.00
86.450	89.370	2.510	10449.0	5990.5	28.093	2.983	2.64		Clay	34.9			84.47	0.76	n.a.	n.a.	0.59	0.369	n.a.	n.a.	n.a.	n.a.	0.00	0.00
86.614	47.160	2.253	10468.7	6000.0	13.975	5.373	3.03		Clay	50.2			44.57	0.76	n.a.	n.a.	0.59	0.369	n.a.	n.a.	n.a.	n.a.	0.00	0.00
86.778	33.560	1.345	10488.4	6009.4	9.424	4.749	3.13		Clay	54.6			31.72	0.76	n.a.	n.a.	0.59	0.369	n.a.	n.a.	n.a.	n.a.	0.00	0.00
86.942	31.000	1.551	10508.1	6018.9	8.555	6.023	3.23		Clay	59.1			29.30	0.76	n.a.	n.a.	0.59	0.369	n.a.	n.a.	n.a.	n.a.	0.00	0.00
87.106	41.050	1.835	10527.8	6028.3	11.873	5.129	3.08		Clay	52.0			38.80	0.76	n.a.	n.a.	0.59	0.368	n.a.	n.a.	n.a.	n.a.	0.00	0.00
87.270	147.510	1.812	10547.4	6037.8	79.587	1.274	2.05		Sand	18.2	269.18	1.8	484.52	0.76	367.43	484.63	0.59	0.368	0.685	2.000	1.606	4.36	0.00	0.00
87.434	232.310	1.599	10567.1	6047.2	126.932	0.704	1.73		Sand	11.7	269.18	1.8	484.52	0.76	367.28	422.40	0.59	0.368	0.685	2.000	1.605	4.36	0.00	0.00
87.598	284.790	0.906	10586.8	6056.7	156.146	0.324	1.47		Sand	7.6		1.8	484.52	0.76	367.13	374.71	0.59	0.367	0.685	2.000	1.604	4.36	0.00	0.00
87.762	210.770	1.662	10606.5	6066.1	114.699	0.809	1.81		Sand	13.0	269.18	1.8	484.52	0.76	366.98	438.27	0.59	0.367	0.684	2.000	1.603	4.36	0.00	0.00
87.927	90.310	2.608	10626.2	6075.6	27.980	3.068	2.65		Clay	35.2			85.36	0.76	n.a.	n.a.	0.59	0.367	n.a.	n.a.	n.a.	n.a.	0.00	0.00
88.091	49.820	2.159	10645.9	6085.0	14.625	4.851	2.99		Clay	48.3			47.09	0.76	n.a.	n.a.	0.59	0.367	n.a.	n.a.	n.a.	n.a.	0.00	0.00
88.255	29.380	1.248	10665.6	6094.5	7.891	5.189	3.22		Clay	58.5			27.77	0.76	n.a.	n.a.	0.59	0.366	n.a.	n.a.	n.a.	n.a.	0.00	0.00
88.419	25.280	0.759	10685.2	6103.9	6.533	3.807	3.21		Clay	58.0			23.89	0.76	n.a.	n.a.	0.59	0.366	n.a.	n.a.	n.a.	n.a.	0.00	0.00
88.583	23.240	0.675	10704.9	6113.4	5.852	3.774	3.25		Clay	59.8			21.97	0.76	n.a.	n.a.	0.59	0.366	n.a.	n.a.	n.a.	n.a.	0.00	0.00
88.747	22.810	0.729	10724.6	6122.8	5.699	4.178	3.28		Clay	61.4			21.56	0.76	n.a.	n.a.	0.58	0.366	n.a.	n.a.	n.a.	n.a.	0.00	0.00
88.911	25.080	0.839	10744.3	6132.3	6.428	4.259	3.24		Clay	59.6			23.71	0.76	n.a.	n.a.	0.58	0.365	n.a.	n.a.	n.a.	n.a.	0.00	0.00
89.075	27.010	0.922	10764.0	6141.7	7.043	4.261	3.21		Clay	58.0			25.53	0.75	n.a.	n.a.	0.58	0.365	n.a.	n.a.	n.a.	n.a.	0.00	0.00
89.239	26.330	0.971	10783.7	6151.2	6.808	4.639	3.24		Clay	59.6			24.89	0.75	n.a.	n.a.	0.58	0.365	n.a.	n.a.	n.a.	n.a.	0.00	0.00
89.403	27.290	0.985	10803.3	6160.6	7.106	4.502	3.22		Clay	58.5			25.79	0.75	n.a.	n.a.	0.58	0.365	n.a.	n.a.	n.a.	n.a.	0.00	0.00
89.567	26.230	0.906	10823.0	6170.1	6.748	4.351	3.23		Clay	59.0			24.79	0.75	n.a.	n.a.	0.58	0.364	n.a.	n.a.	n.a.	n.a.	0.00	0.00
89.731	25.230	0.888	10842.7	6179.5	6.411	4.484	3.26		Clay	60.2			23.85	0.75	n.a.	n.a.	0.58	0.364	n.a.	n.a.	n.a.	n.a.	0.00	0.00
89.895	25.880	0.792	10862.4	6189.0	6.608	3.875	3.21		Clay	58.0			24.46	0.75	n.a.	n.a.	0.58	0.364	n.a.	n.a.	n.a.	n.a.	0.00	0.00
90.059	25.180	0.805	10882.1	6198.4	6.369	4.077	3.23		Clay	59.2			23.80	0.75	n.a.	n.a.	0.58	0.364	n.a.	n.a.	n.a.	n.a.	0.00	0.00
90.223	25.020	0.724	10901.8	6207.9	6.305	3.701	3.21		Clay	58.3			23.65	0.75	n.a.	n.a.	0.58	0.364	n.a.	n.a.	n.a.	n.a.	0.00	0.00
90.387	25.310	0.686	10921.5	6217.3	6.385	3.454	3.19		Clay	57.3			23.92	0.75	n.a.	n.a.	0.58	0.363	n.a.	n.a.	n.a.	n.a.	0.00	0.00
90.551	24.440	1.200	10941.1	6226.7	6.093	6.325	3.36		Clay	65.4			23.10	0.75	n.a.	n.a.	0.58	0.363	n.a.	n.a.	n.a.	n.a.	0.00	0.00
90.715	37.790	1.426	10960.8	6236.2	10.362	4.412	3.08		Clay	52.3			35.72	0.75	n.a.	n.a.	0.58	0.363	n.a.	n.a.	n.a.	n.a.	0.00	0.00
90.879	59.220	1.124	10980.5	6245.6	17.206	2.092	2.71		Clay	37.5			55.97	0.75	n.a.	n.a.	0.58	0.363	n.a.	n.a.	n.a.	n.a.	0.00	0.00
91.043	43.060	1.723	11000.2	6255.1	12.009	4.586	3.04		Clay	50.5			40.70	0.75	n.a.	n.a.	0.58	0.362	n.a.	n.a.	n.a.	n.a.	0.00	0.00
91.207	53.060	1.539	11019.9	6264.5	15.181	3.236	2.87		Clay	43.4			50.15	0.75	n.a.	n.a.	0.58	0.362	n.a.	n.a.	n.a.	n.a.	0.00	0.00
91.371	60.260	1.859	11039.6	6274.0	17.450	3.395	2.83		Clay	42.0			56.96	0.75	n.a.	n.a.	0.58	0.362	n.a.	n.a.	n.a.	n.a.	0.00	0.00
91.535	56.260	1.825	11059.3	6283.4	16.147	3.597	2.88		Clay	43.6			53.18	0.75	n.a.	n.a.	0.58	0.362	n.a.	n.a.	n.a.	n.a.	0.00	0.00
91.699	63.790	1.867	11078.9	6292.9	18.513	3.206	2.80		Clay	40.6			60.29	0.75	n.a.	n.a.	0.58	0.361	n.a.	n.a.	n.a.	n.a.	0.00	0.00
91.864	59.200	2.783	11098.6	6302.3	17.026	5.187	2.96		Clay	47.0			55.95	0.75	n.a.	n.a.	0.58	0.361	n.a.	n.a.	n.a.	n.a.	0.00	0.00
92.028	76.930	3.659	11118.3	6311.8	22.615	5.127	2.86		Clay	43.2			72.71	0.75	n.a.	n.a.	0.58	0.361	n.a.	n.a.	n.a.	n.a.	0.00	0.00
92.192	94.330	4.969	11138.0	6321.2	28.083	5.599	2.82		Clay	41.5			89.16	0.75	n.a.	n.a.	0.58	0.361	n.a.	n.a.	n.a.	n.a.	0.00	0.00
92.356	117.670	6.266	11157.7	6330.7	35.412	5.590	2.75		Clay	38.8			111.22	0.75	n.a.	n.a.	0.57	0.361	n.a.	n.a.	n.a.	n.a.	0.00	0.00
92.520	168.130	5.591	11177.4	6340.1	88.754	3.440	2.32		Sand	25.1	294.8		294.80	0.75	220.70	318.18	0.57	0.360	0.671	2.000	1.572	4.36	0.00	0.00
92.684	249.660	4.071	11197.0	6349.6	133.168	1.668	1.97		Sand	16.4	294.8		294.80	0.75	220.61	291.28	0.57	0.360	0.670	2.000	1.570	4.36	0.00	0.00
92.848	303.000	3.126	11216.7	6359.0	162.146	1.051	1.77		Sand	12.														



CPT No. 1

PGA ( $A_{max}$ ) 0.50

Total Settlement: 0.33 (Inches)

Depth (ft)	$q_c$ (tsf)	$f_s$ (tsf)	$\sigma_{vc}$ (psf)	In situ $\sigma'_{vc}$ (psf)	Q	F (%)	$I_c$	Layer "Plastic" PI > 7	Flag Soil Type	Fines (%)	$q_c$ -N near interfaces (soft layer)	Thin Layer Factor ( $K_{li}$ )	Interpreted $q_c$ -N	$C_N$	$q_{c1N}$	$q_{c1N-CS}$	Stress Reduction Coeff, $r_d$	CSR	$K_{cs}$ for Sand	$CRR_{M=7.5}$ , $\sigma'_{vc} = 1 \text{ atm}$	CRR	Factor of Safety (CRR/CSR)	Vertical Strain $\epsilon_v$	Settlement (Inches)
94.652	178.670	4.280	11433.3	6463.0	93.537	2.474	2.20		Sand	21.8			168.88	0.66	111.53	170.22	0.57	0.358	0.785	0.410	0.377	1.05	0.01	0.00
94.816	194.890	3.658	11453.0	6472.4	102.230	1.934	2.10		Sand	19.2			184.21	0.67	123.70	180.71	0.57	0.357	0.762	0.547	0.488	1.37	0.00	0.00
94.980	197.040	3.065	11472.6	6481.9	103.311	1.602	2.04		Sand	17.8			186.24	0.67	124.40	177.71	0.57	0.357	0.768	0.501	0.451	1.26	0.00	0.00
95.144	213.320	3.247	11492.3	6491.3	112.016	1.564	2.00		Sand	17.1			201.63	0.68	137.65	191.87	0.57	0.357	0.731	0.806	0.690	1.93	0.00	0.00
95.308	254.020	3.579	11512.0	6500.8	133.876	1.442	1.92		Sand	15.4			240.09	0.72	172.40	227.12	0.57	0.357	0.663	2.000	1.554	4.35	0.00	0.00
95.472	274.680	3.085	11531.7	6510.2	144.907	1.147	1.83		Sand	13.5			259.62	0.73	188.25	234.69	0.57	0.357	0.663	2.000	1.553	4.35	0.00	0.00
95.636	281.140	2.802	11551.4	6519.7	148.275	1.018	1.79		Sand	12.7			265.73	0.72	192.31	233.57	0.57	0.356	0.662	2.000	1.552	4.35	0.00	0.00
95.801	282.170	2.870	11571.1	6529.1	148.716	1.039	1.79		Sand	12.8			266.70	0.73	193.46	235.60	0.57	0.356	0.662	2.000	1.551	4.35	0.00	0.00
95.965	277.570	2.742	11590.7	6538.6	146.130	1.009	1.79		Sand	12.7			262.35	0.72	188.74	229.75	0.57	0.356	0.662	2.000	1.550	4.35	0.00	0.00
96.129	279.630	2.713	11610.4	6548.0	147.126	0.991	1.78		Sand	12.6			264.30	0.72	190.24	230.43	0.57	0.356	0.661	2.000	1.549	4.35	0.00	0.00
96.293	249.670	2.328	11630.1	6557.5	130.929	0.955	1.81		Sand	13.1			235.98	0.69	163.24	202.79	0.57	0.356	0.693	1.299	1.054	2.96	0.00	0.00
96.457	169.470	2.113	11649.8	6566.9	87.800	1.291	2.03		Sand	17.5			160.18	0.63	101.01	147.69	0.56	0.355	0.823	0.261	0.252	0.71	0.02	0.00
96.621	113.460	2.065	11669.5	6576.4	57.702	1.919	2.28		Sand	23.8			107.24	0.58	62.20	108.28	0.56	0.355	0.871	0.157	0.160	0.45	0.03	0.00
96.785	105.430	1.552	11689.2	6585.8	53.354	1.558	2.24		Sand	22.9			99.65	0.57	56.63	100.18	0.56	0.355	0.879	0.143	0.147	0.41	0.03	0.00
96.949	120.660	1.453	11708.9	6595.3	61.464	1.266	2.14		Sand	20.2			114.05	0.58	66.21	109.27	0.56	0.355	0.870	0.159	0.162	0.46	0.03	0.00
97.113	124.210	1.558	11728.5	6604.7	63.314	1.317	2.14		Sand	20.2			117.40	0.58	68.61	112.36	0.56	0.355	0.867	0.164	0.167	0.47	0.03	0.00
97.277	131.670	1.550	11748.2	6614.1	67.251	1.232	2.10		Sand	19.3			124.45	0.59	73.45	116.96	0.56	0.355	0.861	0.173	0.175	0.49	0.03	0.00
97.441	152.440	1.941	11767.9	6623.6	78.294	1.324	2.07		Sand	18.6			144.08	0.61	88.16	134.11	0.56	0.354	0.841	0.214	0.211	0.60	0.02	0.00
97.605	236.510	1.965	11787.6	6633.0	123.113	0.852	1.80		Sand	12.8			223.54	0.67	150.15	186.23	0.56	0.354	0.742	0.656	0.570	1.61	0.00	0.00
97.769	305.630	2.097	11807.3	6642.5	159.894	0.700	1.65		Sand	10.4			288.88	0.72	207.38	231.57	0.56	0.354	0.657	2.000	1.539	4.35	0.00	0.00
97.933	358.610	2.169	11827.0	6651.9	188.018	0.615	1.56		Sand	9.0			338.95	0.74	250.55	265.40	0.56	0.354	0.656	2.000	1.538	4.35	0.00	0.00
98.097	324.740	2.240	11846.7	6661.4	169.836	0.703	1.64		Sand	10.1			306.94	0.73	225.05	247.98	0.56	0.354	0.656	2.000	1.537	4.34	0.00	0.00
98.261	251.320	2.192	11866.3	6670.8	130.627	0.893	1.79		Sand	12.7			237.54	0.68	162.69	199.92	0.56	0.354	0.699	1.134	0.928	2.62	0.00	0.00
98.425	219.770	2.058	11886.0	6680.3	113.746	0.962	1.86		Sand	14.0			207.72	0.66	137.28	177.86	0.56	0.353	0.762	0.503	0.449	1.27	0.00	0.00
98.589	214.750	2.135	11905.7	6689.7	110.992	1.022	1.88		Sand	14.5			202.98	0.66	133.69	176.14	0.56	0.353	0.766	0.479	0.429	1.22	0.00	0.00
98.753	246.920	2.281	11925.4	6699.2	127.997	0.947	1.81		Sand	13.2			233.38	0.68	159.37	198.90	0.56	0.353	0.701	1.082	0.889	2.52	0.00	0.00
98.917	327.460	2.292	11945.1	6708.6	170.655	0.713	1.64		Sand	10.1			309.51	0.73	227.33	250.79	0.56	0.353	0.654	2.000	1.532	4.34	0.00	0.00
99.081	395.530	2.959	11964.8	6718.1	206.638	0.760	1.60		Sand	9.4			373.85	0.74	275.63	295.94	0.56	0.353	0.653	2.000	1.531	4.34	0.00	0.00
99.245	440.060	3.571	11984.4	6727.5	230.092	0.823	1.59		Sand	9.3			415.94	0.74	306.55	327.17	0.56	0.353	0.653	2.000	1.530	4.34	0.00	0.00

Depth (ft)	q <sub>c</sub> (tsf)	f <sub>s</sub> (tsf)	σ <sub>vc</sub> (psf)	In situ σ'vc (psf)	Q	F (%)	lc	Layer "Plastic" PI > 7	Flag Soil Type	Fines (%)	q <sub>c</sub> N near interfaces (soft layer)	Thin Layer Factor (K <sub>ti</sub> )	Interpreted q <sub>c</sub> N	C <sub>N</sub>	q <sub>c</sub> 1N	q <sub>c</sub> 1N-CS	Stress Reduction Coeff. r <sub>d</sub>	CSR	K <sub>σ</sub> for Sand	CRR <sub>M=7.5</sub> σ'vc = 1 atm	CRR	Factor of Safety (CRR/CSR)	Vertical Strain ε <sub>v</sub>	Settlement (Inches)
0.164	503.200	0.594	20.5	20.5	4831.382	0.118	0.36		Unsaturated	0.2			475.61	1.70	808.54	808.54	1.00	0.325	1.100	n.a.	n.a.	n.a.	0.00	0.00
0.328	243.670	0.727	41.0	41.0	1654.208	0.298	0.74		Unsaturated	1.3			230.31	1.70	391.53	391.53	1.00	0.325	1.100	n.a.	n.a.	n.a.	0.00	0.00
0.492	156.330	0.892	61.5	61.5	866.435	0.570	1.11		Unsaturated	3.7			147.76	1.70	251.19	251.19	1.00	0.325	1.100	n.a.	n.a.	n.a.	0.00	0.00
0.656	101.490	0.801	82.0	82.0	487.032	0.790	1.36		Unsaturated	6.3			95.93	1.70	163.07	163.80	1.00	0.325	1.100	n.a.	n.a.	n.a.	0.00	0.00
0.820	48.230	1.248	102.5	102.5	206.876	2.590	2.00		Unsaturated	17.0			45.59	1.70	77.50	116.88	1.00	0.325	1.100	n.a.	n.a.	n.a.	0.00	0.00
0.984	32.780	1.317	123.0	123.0	128.250	4.025	2.28		Unsaturated	23.8			30.98	1.70	52.67	95.82	1.00	0.325	1.100	n.a.	n.a.	n.a.	0.00	0.00
1.148	24.830	1.430	143.5	143.5	89.848	5.775	2.50		Unsaturated	30.2			23.47	1.70	39.90	82.29	1.00	0.325	1.100	n.a.	n.a.	n.a.	0.00	0.00
1.312	21.450	1.209	164.0	164.0	72.537	5.656	2.55		Unsaturated	31.8			20.27	1.70	34.47	75.46	1.00	0.325	1.100	n.a.	n.a.	n.a.	0.00	0.00
1.476	17.430	1.220	184.5	184.5	90.384	7.038	2.56		Unsaturated	32.3			16.47	1.70	28.01	66.92	1.00	0.325	1.100	n.a.	n.a.	n.a.	0.00	0.00
1.640	15.870	1.133	205.1	205.1	76.354	7.184	2.61		Unsaturated	34.0			15.00	1.70	25.50	63.87	1.00	0.325	1.100	n.a.	n.a.	n.a.	0.00	0.00
1.804	15.690	1.026	225.6	225.6	70.564	6.584	2.60		Unsaturated	33.7			14.83	1.70	25.21	63.43	1.00	0.325	1.100	n.a.	n.a.	n.a.	0.00	0.00
1.969	18.010	1.035	246.1	246.1	76.239	5.787	2.54		Unsaturated	31.6			17.02	1.70	28.94	68.01	1.00	0.325	1.100	n.a.	n.a.	n.a.	0.00	0.00
2.133	19.030	1.185	266.6	266.6	76.155	6.270	2.57		Unsaturated	32.5			17.99	1.70	30.58	70.40	1.00	0.325	1.100	n.a.	n.a.	n.a.	0.00	0.00
2.297	19.010	1.314	287.1	287.1	72.189	6.967	2.62		Unsaturated	34.2			17.97	1.70	30.55	70.67	1.00	0.325	1.100	n.a.	n.a.	n.a.	0.00	0.00
2.461	19.700	1.270	307.6	307.6	71.264	6.499	2.60		Unsaturated	33.5			18.62	1.70	31.65	72.04	1.00	0.325	1.100	n.a.	n.a.	n.a.	0.00	0.00
2.625	21.110	1.310	328.1	328.1	72.994	6.253	2.58		Unsaturated	32.8			19.95	1.70	33.92	74.96	1.00	0.325	1.100	n.a.	n.a.	n.a.	0.00	0.00
2.789	22.620	1.463	348.6	348.6	74.970	6.518	2.58		Unsaturated	33.1			21.38	1.70	36.35	78.26	1.00	0.325	1.100	n.a.	n.a.	n.a.	0.00	0.00
2.953	20.940	1.533	369.1	369.1	66.606	7.386	2.66		Unsaturated	35.6			19.79	1.70	33.65	75.05	1.00	0.324	1.100	n.a.	n.a.	n.a.	0.00	0.00
3.117	18.100	1.388	389.6	389.6	55.325	7.751	2.73		Unsaturated	38.0			17.11	1.70	29.08	69.17	1.00	0.324	1.100	n.a.	n.a.	n.a.	0.00	0.00
3.281	15.850	1.170	410.1	410.1	76.297	7.475	2.63		Unsaturated	34.5			14.98	1.70	25.47	63.90	1.00	0.324	1.100	n.a.	n.a.	n.a.	0.00	0.00
3.445	13.780	1.006	430.6	430.6	63.002	7.413	2.68		Unsaturated	36.2			13.02	1.70	22.14	59.64	1.00	0.324	1.100	n.a.	n.a.	n.a.	0.00	0.00
3.609	14.680	0.933	451.1	451.1	64.083	6.456	2.62		Unsaturated	34.4			13.88	1.70	23.59	61.36	1.00	0.324	1.100	n.a.	n.a.	n.a.	0.00	0.00
3.773	17.060	1.077	471.6	471.6	45.477	6.401	2.72		Unsaturated	37.7			16.12	1.70	27.41	66.89	1.00	0.324	1.100	n.a.	n.a.	n.a.	0.00	0.00
3.937	20.290	1.247	492.1	492.1	52.590	6.222	2.67		Unsaturated	35.9			19.18	1.70	32.60	73.68	0.99	0.323	1.100	n.a.	n.a.	n.a.	0.00	0.00
4.101	21.760	1.258	512.6	512.6	54.831	5.851	2.64		Unsaturated	34.8			20.57	1.70	34.96	76.70	0.99	0.323	1.100	n.a.	n.a.	n.a.	0.00	0.00
4.265	22.200	1.258	533.1	533.1	54.412	5.735	2.63		Unsaturated	34.6			20.98	1.70	35.67	77.63	0.99	0.323	1.100	n.a.	n.a.	n.a.	0.00	0.00
4.429	21.920	1.239	553.6	553.6	52.292	5.724	2.64		Unsaturated	35.0			20.72	1.70	35.22	77.08	0.99	0.323	1.100	n.a.	n.a.	n.a.	0.00	0.00
4.593	23.230	1.273	574.1	574.1	54.039	5.548	2.62		Unsaturated	34.3			21.96	1.70	37.33	79.80	0.99	0.323	1.100	n.a.	n.a.	n.a.	0.00	0.00
4.757	26.080	1.475	594.7	594.7	59.254	5.721	2.61		Unsaturated	33.8			24.65	1.70	41.91	85.85	0.99	0.322	1.100	n.a.	n.a.	n.a.	0.00	0.00
4.921	25.420	1.545	615.2	615.2	56.360	6.151	2.64		Unsaturated	35.1			24.03	1.70	40.84	84.65	0.99	0.322	1.100	n.a.	n.a.	n.a.	0.00	0.00
5.085	22.670	1.363	635.7	635.7	49.027	6.096	2.68		Unsaturated	36.4			21.43	1.70	36.43	78.89	0.99	0.322	1.100	n.a.	n.a.	n.a.	0.00	0.00
5.249	22.060	1.184	656.2	656.2	46.619	5.449	2.66		Unsaturated	35.6			20.85	1.70	35.45	77.47	0.99	0.322	1.100	n.a.	n.a.	n.a.	0.00	0.00
5.413	21.540	0.857	676.7	676.7	44.512	4.043	2.58		Unsaturated	32.9			20.36	1.70	34.61	75.89	0.99	0.322	1.100	n.a.	n.a.	n.a.	0.00	0.00
5.577	18.240	1.015	697.2	697.2	51.325	5.674	2.64		Unsaturated	35.1			17.24	1.70	29.31	69.14	0.99	0.321	1.093	n.a.	n.a.	n.a.	0.00	0.00
5.741	19.580	1.103	717.7	717.7	53.564	5.738	2.64		Unsaturated	34.8			18.51	1.70	31.46	71.99	0.99	0.321	1.092	n.a.	n.a.	n.a.	0.00	0.00
5.906	20.740	1.159	738.2	738.2	55.192	5.690	2.62		Unsaturated	34.4			19.60	1.70	33.33	74.44	0.99	0.321	1.092	n.a.	n.a.	n.a.	0.00	0.00
6.070	22.080	1.298	758.7	758.7	57.205	5.982	2.63		Unsaturated	34.6			20.87	1.70	35.48	77.37	0.99	0.321	1.091	n.a.	n.a.	n.a.	0.00	0.00
6.234	19.750	1.296	779.2	779.2	49.693	6.696	2.71		Unsaturated	37.3			18.67	1.70	31.73	72.68	0.99	0.321	1.086	n.a.	n.a.	n.a.	0.00	0.00
6.398	17.710	1.029	799.7	799.7	43.291	5.944	2.71		Unsaturated	37.4			16.74	1.70	28.46	68.27	0.99	0.321	1.081	n.a.	n.a.	n.a.	0.00	0.00
6.562	16.360	0.831	820.2	820.2	38.892	5.213	2.70		Clay	37.0			15.46	1.28	n.a.	n.a.	0.99	0.322	n.a.	n.a.	n.a.	n.a.	0.00	0.00
6.726	15.360	0.857	840.7	840.7	35.540	5.736	2.76		Clay	39.1			14.52	1.28	n.a.	n.a.	0.99	0.326	n.a.	n.a.	n.a.	n.a.	0.00	0.00
6.890	17.260	1.055	861.2	861.2	39.083	6.270	2.76		Clay	39.1			16.31	1.27	n.a.	n.a.	0.98	0.329	n.a.	n.a.	n.a.	n.a.	0.00	0.00
7.054	18.890	1.178	881.7	881.7	41.848	6.386	2.74		Clay	38.6			17.85	1.26	n.a.	n.a.	0.98	0.333	n.a.	n.a.	n.a.	n.a.	0.00	0.00
7.218	17.860	1.198	902.2	902.2	38.591	6.880	2.79		Clay	40.3			16.88	1.25	n.a.	n.a.	0.98	0.336	n.a.	n.a.	n.a.	n.a.	0.00	0.00
7.382	16.310	1.155	922.7	922.7	34.351	7.290	2.84		Clay	42.3			15.42	1.24	n.a.	n.a.	0.98	0.340	n.a.	n.a.	n.a.	n.a.	0.00	0.00
7.546	15.860	1.073	943.2	943.2	32.629	6.974	2.84		Clay	42.4			14.99	1.24	n.a.	n.a.	0.98	0.343	n.a.	n.a.	n.a.	n.a.	0.00	0.00
7.710	14.710	1.033	963.7	963.7	29.527	7.260	2.89		Clay	44.1			13.90	1.23	n.a.	n.a.	0.98	0.346	n.a.	n.a.	n.a.	n.a.	0.00	0.00
7.874	14.230	1.015	984.3	984.3	27.915	7.387	2.91		Clay	44.9			13.45	1.22	n.a.	n.a.	0.98	0.349	n.a.	n.a.	n.a.	n.a.	0.00	0.00
8.038	14.150	1.004	1004.8	1004.8	27.166	7.358	2.92		Clay	45.2			13.37	1.22	n.a.	n.a.	0.98	0.352	n.a.	n.a.	n.a.	n.a.	0.00	0.00
8.202	15.270	0.991	1025.3	1025.3	28.787	6.713	2.87		Clay	43.4			14.43	1.21	n.a.	n.a.	0.98	0.355	n.a.	n.a.	n.a.	n.a.	0.00	0.00
8.366	15.340	1.020	1045.8	1045.8	28.337	6.881	2.88		Clay	43.9			14.50	1.20	n.a.	n.a.	0.98	0.358	n.a.	n.a.	n.a.	n.a.	0.00	0.00
8.530	15.770	1.005	1066.3	1066.3	28.580	6.593	2.87		Clay	43.3			14.91	1.20	n.a.	n.a.	0.98	0.361	n.a.	n.a.	n.a.	n.a.	0.00	0.00
8.694	14.970	0.918	1086.8	1086.8	26.549	6.365	2.88		Clay	43.7			14.15	1.19	n.a.	n.a.	0.98	0.364	n.a.	n.a.	n.a.	n.a.	0.00	0.00
8.858	13.660	0.865	1107.3	1107.3	23.673	6.602	2.92		Clay	45.6			12.91	1.19	n.a.	n.a.	0.98	0.367	n.a.	n.a.	n.a.	n.a.	0.00	0.00
9.022	15.580	0.950	1127.8	1127.8	26.629	6.328	2.88		Clay	43.6			14.73	1.18	n.a.	n.a.	0.98	0.369	n.a.	n.a.				

Depth (ft)	q <sub>c</sub> (tsf)	f <sub>s</sub> (tsf)	σ <sub>vc</sub> (psf)	In situ σ <sub>vc</sub> (psf)	Q	F (%)	l <sub>c</sub>	Layer "Plastic" PI > 7	Flag Soil Type	Fines (%)	q <sub>c-N</sub> near interfaces (soft layer)	Thin Layer Factor (K <sub>tl</sub> )	Interpreted q <sub>c-N</sub>	C <sub>N</sub>	q <sub>c1-N</sub>	q <sub>c1-N-CS</sub>	Stress Reduction Coeff. r <sub>d</sub>	CSR	K <sub>σ</sub> for Sand	CRR <sub>M=7.5</sub> σ <sub>vc</sub> = 1 atm	CRR	Factor of Safety (CRR/CSR)	Vertical Strain ε <sub>v</sub>	Settlement (Inches)
10.663	19.650	0.980	1332.8	1332.8	28.486	5.162	2.79		Clay	40.4			18.57	1.13	n.a.	n.a.	0.97	0.393	n.a.	n.a.	n.a.	n.a.	0.00	0.00
10.827	19.030	1.041	1353.3	1353.3	27.123	5.672	2.84		Clay	42.1			17.99	1.13	n.a.	n.a.	0.97	0.395	n.a.	n.a.	n.a.	n.a.	0.00	0.00
10.991	18.750	0.967	1373.9	1373.9	26.296	5.353	2.83		Clay	41.8			17.72	1.12	n.a.	n.a.	0.97	0.397	n.a.	n.a.	n.a.	n.a.	0.00	0.00
11.155	22.200	0.859	1394.4	1394.4	30.843	3.995	2.69		Clay	36.7			20.98	1.12	n.a.	n.a.	0.97	0.399	n.a.	n.a.	n.a.	n.a.	0.00	0.00
11.319	18.250	0.913	1414.9	1414.9	24.798	5.206	2.84		Clay	42.2			17.25	1.11	n.a.	n.a.	0.97	0.401	n.a.	n.a.	n.a.	n.a.	0.00	0.00
11.483	16.580	1.100	1435.4	1435.4	22.102	6.933	2.96		Clay	47.1			15.67	1.11	n.a.	n.a.	0.97	0.403	n.a.	n.a.	n.a.	n.a.	0.00	0.00
11.647	21.980	1.258	1455.9	1455.9	29.195	5.918	2.83		Clay	41.7			20.78	1.10	n.a.	n.a.	0.97	0.405	n.a.	n.a.	n.a.	n.a.	0.00	0.00
11.811	24.880	1.182	1476.4	1476.4	32.704	4.896	2.73		Clay	38.2			23.52	1.10	n.a.	n.a.	0.96	0.406	n.a.	n.a.	n.a.	n.a.	0.00	0.00
11.975	26.610	0.919	1496.9	1496.9	34.554	3.554	2.62		Clay	34.3			25.15	1.10	n.a.	n.a.	0.96	0.408	n.a.	n.a.	n.a.	n.a.	0.00	0.00
12.139	23.930	0.754	1517.4	1517.4	30.541	3.255	2.63		Clay	34.8			22.62	1.09	n.a.	n.a.	0.96	0.410	n.a.	n.a.	n.a.	n.a.	0.00	0.00
12.303	16.690	0.622	1537.9	1537.9	20.705	3.906	2.81		Clay	41.3			15.78	1.09	n.a.	n.a.	0.96	0.412	n.a.	n.a.	n.a.	n.a.	0.00	0.00
12.467	11.290	0.626	1558.4	1558.4	13.489	5.953	3.07		Clay	51.9			10.67	1.08	n.a.	n.a.	0.96	0.413	n.a.	n.a.	n.a.	n.a.	0.00	0.00
12.631	11.280	0.684	1578.9	1578.9	13.288	6.516	3.11		Clay	53.3			10.66	1.08	n.a.	n.a.	0.96	0.415	n.a.	n.a.	n.a.	n.a.	0.00	0.00
12.795	11.910	0.767	1599.4	1599.4	13.893	6.904	3.11		Clay	53.4			11.26	1.08	n.a.	n.a.	0.96	0.416	n.a.	n.a.	n.a.	n.a.	0.00	0.00
12.959	11.740	0.751	1619.9	1619.9	13.495	6.871	3.12		Clay	53.7			11.10	1.07	n.a.	n.a.	0.96	0.418	n.a.	n.a.	n.a.	n.a.	0.00	0.00
13.123	10.630	0.738	1640.4	1640.4	11.960	7.522	3.18		Clay	56.7			10.05	1.07	n.a.	n.a.	0.96	0.419	n.a.	n.a.	n.a.	n.a.	0.00	0.00
13.287	9.420	0.711	1660.9	1660.9	10.343	8.280	3.26		Clay	60.3			8.90	1.07	n.a.	n.a.	0.96	0.421	n.a.	n.a.	n.a.	n.a.	0.00	0.00
13.451	9.290	0.687	1681.4	1681.4	10.050	8.132	3.26		Clay	60.5			8.78	1.06	n.a.	n.a.	0.96	0.422	n.a.	n.a.	n.a.	n.a.	0.00	0.00
13.615	9.270	0.655	1701.9	1701.9	9.893	7.784	3.25		Clay	60.1			8.76	1.06	n.a.	n.a.	0.96	0.424	n.a.	n.a.	n.a.	n.a.	0.00	0.00
13.780	8.720	0.590	1722.4	1722.4	9.125	7.505	3.27		Clay	60.9			8.24	1.06	n.a.	n.a.	0.96	0.425	n.a.	n.a.	n.a.	n.a.	0.00	0.00
13.944	8.060	0.540	1742.9	1742.9	8.249	7.511	3.30		Clay	62.6			7.62	1.05	n.a.	n.a.	0.96	0.427	n.a.	n.a.	n.a.	n.a.	0.00	0.00
14.108	7.810	0.494	1763.5	1763.5	7.858	7.123	3.31		Clay	62.7			7.38	1.05	n.a.	n.a.	0.95	0.428	n.a.	n.a.	n.a.	n.a.	0.00	0.00
14.272	7.700	0.497	1784.0	1784.0	7.632	7.305	3.32		Clay	63.5			7.28	1.05	n.a.	n.a.	0.95	0.429	n.a.	n.a.	n.a.	n.a.	0.00	0.00
14.436	8.380	0.537	1804.5	1804.5	8.288	7.183	3.29		Clay	61.9			7.92	1.04	n.a.	n.a.	0.95	0.430	n.a.	n.a.	n.a.	n.a.	0.00	0.00
14.600	8.440	0.570	1825.0	1825.0	8.249	7.576	3.31		Clay	62.7			7.98	1.04	n.a.	n.a.	0.95	0.432	n.a.	n.a.	n.a.	n.a.	0.00	0.00
14.764	8.410	0.589	1845.5	1845.5	8.114	7.872	3.32		Clay	63.5			7.95	1.04	n.a.	n.a.	0.95	0.433	n.a.	n.a.	n.a.	n.a.	0.00	0.00
14.928	8.780	0.583	1866.0	1866.0	8.411	7.431	3.29		Clay	62.1			8.30	1.03	n.a.	n.a.	0.95	0.434	n.a.	n.a.	n.a.	n.a.	0.00	0.00
15.092	9.390	0.588	1886.0	1880.3	8.985	6.961	3.25		Clay	60.2			8.88	1.03	n.a.	n.a.	0.95	0.435	n.a.	n.a.	n.a.	n.a.	0.00	0.00
15.256	9.980	0.592	1905.7	1889.7	9.554	6.554	3.22		Clay	58.4			9.43	1.03	n.a.	n.a.	0.95	0.436	n.a.	n.a.	n.a.	n.a.	0.00	0.00
15.420	10.270	0.636	1925.4	1899.2	9.801	6.834	3.22		Clay	58.5			9.71	1.03	n.a.	n.a.	0.95	0.438	n.a.	n.a.	n.a.	n.a.	0.00	0.00
15.584	10.090	0.652	1945.1	1908.6	9.554	7.148	3.24		Clay	59.5			9.54	1.03	n.a.	n.a.	0.95	0.439	n.a.	n.a.	n.a.	n.a.	0.00	0.00
15.748	9.270	0.624	1964.8	1918.1	8.642	7.531	3.29		Clay	61.9			8.76	1.03	n.a.	n.a.	0.95	0.440	n.a.	n.a.	n.a.	n.a.	0.00	0.00
15.912	9.040	0.534	1984.4	1927.5	8.350	6.634	3.27		Clay	60.7			8.54	1.02	n.a.	n.a.	0.95	0.441	n.a.	n.a.	n.a.	n.a.	0.00	0.00
16.076	9.190	0.507	2004.1	1937.0	8.454	6.191	3.24		Clay	59.6			8.69	1.02	n.a.	n.a.	0.95	0.442	n.a.	n.a.	n.a.	n.a.	0.00	0.00
16.240	9.280	0.481	2023.8	1946.4	8.496	5.818	3.22		Clay	58.8			8.77	1.02	n.a.	n.a.	0.94	0.443	n.a.	n.a.	n.a.	n.a.	0.00	0.00
16.404	8.530	0.451	2043.5	1955.9	7.678	6.001	3.27		Clay	60.8			8.06	1.02	n.a.	n.a.	0.94	0.444	n.a.	n.a.	n.a.	n.a.	0.00	0.00
16.568	8.720	0.424	2063.2	1965.3	7.824	5.508	3.24		Clay	59.4			8.24	1.02	n.a.	n.a.	0.94	0.445	n.a.	n.a.	n.a.	n.a.	0.00	0.00
16.732	9.430	0.459	2082.9	1974.8	8.496	5.475	3.21		Clay	58.0			8.91	1.02	n.a.	n.a.	0.94	0.446	n.a.	n.a.	n.a.	n.a.	0.00	0.00
16.896	10.280	0.530	2102.6	1984.2	9.302	5.746	3.19		Clay	57.1			9.72	1.02	n.a.	n.a.	0.94	0.447	n.a.	n.a.	n.a.	n.a.	0.00	0.00
17.060	10.710	0.619	2122.2	1993.7	9.679	6.415	3.21		Clay	57.9			10.12	1.02	n.a.	n.a.	0.94	0.447	n.a.	n.a.	n.a.	n.a.	0.00	0.00
17.224	11.750	0.687	2141.9	2003.1	10.662	6.436	3.17		Clay	56.4			11.11	1.01	n.a.	n.a.	0.94	0.448	n.a.	n.a.	n.a.	n.a.	0.00	0.00
17.388	13.390	0.771	2161.6	2012.6	12.232	6.260	3.12		Clay	54.0			12.66	1.01	n.a.	n.a.	0.94	0.449	n.a.	n.a.	n.a.	n.a.	0.00	0.00
17.552	14.730	0.862	2181.3	2022.0	13.491	6.322	3.09		Clay	52.7			13.92	1.01	n.a.	n.a.	0.94	0.450	n.a.	n.a.	n.a.	n.a.	0.00	0.00
17.717	15.300	0.958	2201.0	2031.5	13.980	6.747	3.10		Clay	53.0			14.46	1.01	n.a.	n.a.	0.94	0.451	n.a.	n.a.	n.a.	n.a.	0.00	0.00
17.881	19.970	1.220	2220.7	2040.9	18.482	6.470	3.00		Clay	48.6			18.88	1.01	n.a.	n.a.	0.94	0.452	n.a.	n.a.	n.a.	n.a.	0.00	0.00
18.045	36.030	1.393	2240.4	2050.4	34.052	3.989	2.66		Clay	35.6			34.05	1.01	n.a.	n.a.	0.94	0.452	n.a.	n.a.	n.a.	n.a.	0.00	0.00
18.209	46.090	1.458	2260.0	2059.8	43.071	3.244	2.52		Sand	31.1		1.8	78.41	1.01	79.32	135.28	0.93	0.453	1.004	0.218	0.256	0.56	0.02	0.05
18.373	38.720	0.983	2279.7	2069.3	35.919	2.614	2.52		Sand	30.9	43.56	1.8	78.41	1.01	79.16	135.02	0.93	0.454	1.003	0.217	0.255	0.56	0.02	0.05
18.537	21.420	0.813	2299.4	2078.7	19.503	4.013	2.84		Clay	42.3			20.25	1.00	n.a.	n.a.	0.93	0.455	n.a.	n.a.	n.a.	n.a.	0.00	0.00
18.701	14.180	0.780	2319.1	2088.2	12.471	5.988	3.10		Clay	53.2			13.40	1.00	n.a.	n.a.	0.93	0.455	n.a.	n.a.	n.a.	n.a.	0.00	0.00
18.865	13.400	0.749	2338.8	2097.6	11.661	6.122	3.13		Clay	54.4			12.67	1.00	n.a.	n.a.	0.93	0.456	n.a.	n.a.	n.a.	n.a.	0.00	0.00
19.029	13.740	0.720	2358.5	2107.1	11.923	5.730	3.11		Clay	53.3			12.99	1.00	n.a.	n.a.	0.93	0.457	n.a.	n.a.	n.a.	n.a.	0.00	0.00
19.193	13.450	0.617	2378.1	2116.5	11.586	5.031	3.08		Clay	52.1			12.71	1.00	n.a.	n.a.	0.93	0.457	n.a.	n.a.	n.a.	n.a.	0.00	0.00
19.357	12.840	0.580	2397.8	2126.0	10.951	4.983	3.10		Clay	52.9			12.14	1.00	n.a.	n.a.	0.93	0.458	n.a.	n.a.	n.a.	n.a.	0.00	0.00
19.521	12.650	0.658	2417.5	2135.4	10.716	5.752	3.14		Clay	54.9			11.96	1.00	n.a.	n.a.	0.93	0.459	n.a.	n.a.	n.a.	n.a.	0.00	0.00
19.685	12.420	0.713	2437.2	2144.9	10.445	6.365	3.18		Clay	56.6			11.74	1.00	n.a.	n.a.	0.93	0.459	n.a.	n.a.	n.a.	n.a.	0.00	0.00
19.849	12.930	0.738	2456.9	2154.3	10.863	6.306																		

Depth (ft)	q <sub>c</sub> (tsf)	f <sub>s</sub> (tsf)	σ <sub>vc</sub> (psf)	In situ σ <sub>vc</sub> (psf)	Q	F (%)	l <sub>c</sub>	Layer "Plastic" PI > 7	Flag Soil Type	Fines (%)	q <sub>c-N</sub> near interfaces (soft layer)	Thin Layer Factor (K <sub>tl</sub> )	Interpreted q <sub>c-N</sub>	C <sub>N</sub>	q <sub>c1N</sub>	q <sub>c1N-CS</sub>	Stress Reduction Coeff. r <sub>d</sub>	CSR	K <sub>σ</sub> for Sand	CRRM=7.5, σ <sub>vc</sub> = 1 atm	CRR	Factor of Safety (CRR/CSR)	Vertical Strain ε <sub>v</sub>	Settlement (Inches)
21.161	14.520	0.829	2614.4	2229.9	11.851	6.276	3.13		Clay	54.5			13.72	0.99	n.a.	n.a.	0.92	0.464	n.a.	n.a.	n.a.	n.a.	0.00	0.00
21.325	15.300	0.857	2634.1	2239.3	12.488	6.129	3.11		Clay	53.4			14.46	0.99	n.a.	n.a.	0.92	0.465	n.a.	n.a.	n.a.	n.a.	0.00	0.00
21.490	15.760	0.807	2653.7	2248.8	12.836	5.591	3.07		Clay	51.9			14.90	0.98	n.a.	n.a.	0.92	0.465	n.a.	n.a.	n.a.	n.a.	0.00	0.00
21.654	14.300	0.623	2673.4	2258.2	11.481	4.807	3.07		Clay	51.7			13.52	0.98	n.a.	n.a.	0.92	0.465	n.a.	n.a.	n.a.	n.a.	0.00	0.00
21.818	12.560	0.473	2693.1	2267.7	9.890	4.215	3.09		Clay	52.5			11.87	0.98	n.a.	n.a.	0.92	0.466	n.a.	n.a.	n.a.	n.a.	0.00	0.00
21.982	10.770	0.472	2712.8	2277.1	8.268	5.017	3.19		Clay	57.4			10.18	0.98	n.a.	n.a.	0.92	0.466	n.a.	n.a.	n.a.	n.a.	0.00	0.00
22.146	10.850	0.520	2732.5	2286.6	8.295	5.483	3.22		Clay	58.4			10.26	0.98	n.a.	n.a.	0.91	0.467	n.a.	n.a.	n.a.	n.a.	0.00	0.00
22.310	10.650	0.549	2752.2	2296.0	8.078	5.918	3.25		Clay	59.8			10.07	0.98	n.a.	n.a.	0.91	0.467	n.a.	n.a.	n.a.	n.a.	0.00	0.00
22.474	10.560	0.520	2771.9	2305.5	7.958	5.668	3.24		Clay	59.5			9.98	0.98	n.a.	n.a.	0.91	0.467	n.a.	n.a.	n.a.	n.a.	0.00	0.00
22.638	11.080	0.495	2791.5	2314.9	8.367	5.112	3.20		Clay	57.4			10.47	0.98	n.a.	n.a.	0.91	0.468	n.a.	n.a.	n.a.	n.a.	0.00	0.00
22.802	11.380	0.505	2811.2	2324.4	8.582	5.063	3.18		Clay	56.9			10.76	0.98	n.a.	n.a.	0.91	0.468	n.a.	n.a.	n.a.	n.a.	0.00	0.00
22.966	11.190	0.546	2830.9	2333.8	8.376	5.589	3.22		Clay	58.5			10.58	0.97	n.a.	n.a.	0.91	0.469	n.a.	n.a.	n.a.	n.a.	0.00	0.00
23.130	11.520	0.559	2850.6	2343.3	8.616	5.542	3.21		Clay	57.9			10.89	0.97	n.a.	n.a.	0.91	0.469	n.a.	n.a.	n.a.	n.a.	0.00	0.00
23.294	11.000	0.563	2870.3	2352.7	8.131	5.882	3.24		Clay	59.6			10.40	0.97	n.a.	n.a.	0.91	0.469	n.a.	n.a.	n.a.	n.a.	0.00	0.00
23.458	10.470	0.536	2890.0	2362.2	7.641	5.939	3.27		Clay	60.8			9.90	0.97	n.a.	n.a.	0.91	0.470	n.a.	n.a.	n.a.	n.a.	0.00	0.00
23.622	10.060	0.503	2909.6	2371.6	7.257	5.850	3.28		Clay	61.4			9.51	0.97	n.a.	n.a.	0.91	0.470	n.a.	n.a.	n.a.	n.a.	0.00	0.00
23.786	9.820	0.468	2929.3	2381.1	7.018	5.598	3.28		Clay	61.4			9.28	0.97	n.a.	n.a.	0.91	0.470	n.a.	n.a.	n.a.	n.a.	0.00	0.00
23.950	10.020	0.470	2949.0	2390.5	7.149	5.496	3.27		Clay	60.9			9.47	0.97	n.a.	n.a.	0.91	0.470	n.a.	n.a.	n.a.	n.a.	0.00	0.00
24.114	10.360	0.516	2968.7	2400.0	7.396	5.815	3.27		Clay	61.0			9.79	0.97	n.a.	n.a.	0.90	0.471	n.a.	n.a.	n.a.	n.a.	0.00	0.00
24.278	10.560	0.543	2988.4	2409.4	7.525	5.986	3.27		Clay	61.1			9.98	0.97	n.a.	n.a.	0.90	0.471	n.a.	n.a.	n.a.	n.a.	0.00	0.00
24.442	10.530	0.544	3008.1	2418.9	7.463	6.025	3.28		Clay	61.3			9.95	0.97	n.a.	n.a.	0.90	0.471	n.a.	n.a.	n.a.	n.a.	0.00	0.00
24.606	10.200	0.515	3027.8	2428.3	7.154	5.924	3.29		Clay	61.8			9.64	0.96	n.a.	n.a.	0.90	0.472	n.a.	n.a.	n.a.	n.a.	0.00	0.00
24.770	9.830	0.420	3047.4	2437.8	6.815	5.059	3.26		Clay	60.7			9.29	0.96	n.a.	n.a.	0.90	0.472	n.a.	n.a.	n.a.	n.a.	0.00	0.00
24.934	9.910	0.478	3067.1	2447.2	6.846	5.704	3.29		Clay	62.1			9.37	0.96	n.a.	n.a.	0.90	0.472	n.a.	n.a.	n.a.	n.a.	0.00	0.00
25.098	8.970	0.450	3086.8	2456.7	6.046	6.061	3.35		Clay	62.1			8.48	0.96	n.a.	n.a.	0.90	0.472	n.a.	n.a.	n.a.	n.a.	0.00	0.00
25.262	9.600	0.411	3106.5	2466.1	6.526	5.108	3.28		Clay	61.5			9.07	0.96	n.a.	n.a.	0.90	0.472	n.a.	n.a.	n.a.	n.a.	0.00	0.00
25.427	9.510	0.389	3126.2	2475.6	6.420	4.890	3.28		Clay	61.3			8.99	0.96	n.a.	n.a.	0.90	0.473	n.a.	n.a.	n.a.	n.a.	0.00	0.00
25.591	9.380	0.354	3145.9	2485.0	6.283	4.532	3.26		Clay	60.7			8.87	0.96	n.a.	n.a.	0.90	0.473	n.a.	n.a.	n.a.	n.a.	0.00	0.00
25.755	9.330	0.352	3165.6	2494.5	6.212	4.540	3.27		Clay	60.9			8.82	0.96	n.a.	n.a.	0.90	0.473	n.a.	n.a.	n.a.	n.a.	0.00	0.00
25.919	9.490	0.379	3185.2	2503.9	6.308	4.798	3.28		Clay	61.3			8.97	0.96	n.a.	n.a.	0.89	0.473	n.a.	n.a.	n.a.	n.a.	0.00	0.00
26.083	9.800	0.396	3204.9	2513.4	6.523	4.833	3.27		Clay	60.8			9.26	0.96	n.a.	n.a.	0.89	0.473	n.a.	n.a.	n.a.	n.a.	0.00	0.00
26.247	9.580	0.393	3224.6	2522.8	6.317	4.926	3.28		Clay	61.6			9.05	0.95	n.a.	n.a.	0.89	0.474	n.a.	n.a.	n.a.	n.a.	0.00	0.00
26.411	9.740	0.419	3244.3	2532.3	6.412	5.158	3.29		Clay	61.9			9.21	0.95	n.a.	n.a.	0.89	0.474	n.a.	n.a.	n.a.	n.a.	0.00	0.00
26.575	10.270	0.458	3264.0	2541.7	6.797	5.298	3.28		Clay	61.3			9.71	0.95	n.a.	n.a.	0.89	0.474	n.a.	n.a.	n.a.	n.a.	0.00	0.00
26.739	10.260	0.478	3283.7	2551.2	6.756	5.544	3.29		Clay	62.0			9.70	0.95	n.a.	n.a.	0.89	0.474	n.a.	n.a.	n.a.	n.a.	0.00	0.00
26.903	10.180	0.482	3303.3	2560.6	6.661	5.655	3.30		Clay	62.4			9.62	0.95	n.a.	n.a.	0.89	0.474	n.a.	n.a.	n.a.	n.a.	0.00	0.00
27.067	10.170	0.477	3323.0	2570.1	6.621	5.600	3.30		Clay	62.4			9.61	0.95	n.a.	n.a.	0.89	0.474	n.a.	n.a.	n.a.	n.a.	0.00	0.00
27.231	10.200	0.444	3342.7	2579.5	6.613	5.207	3.28		Clay	61.5			9.64	0.95	n.a.	n.a.	0.89	0.474	n.a.	n.a.	n.a.	n.a.	0.00	0.00
27.395	10.090	0.423	3362.4	2589.0	6.496	5.030	3.28		Clay	61.4			9.54	0.95	n.a.	n.a.	0.89	0.474	n.a.	n.a.	n.a.	n.a.	0.00	0.00
27.559	10.270	0.435	3382.1	2598.4	6.603	5.071	3.28		Clay	61.2			9.71	0.95	n.a.	n.a.	0.89	0.475	n.a.	n.a.	n.a.	n.a.	0.00	0.00
27.723	9.620	0.400	3401.8	2607.9	6.073	5.055	3.30		Clay	62.6			9.09	0.95	n.a.	n.a.	0.88	0.475	n.a.	n.a.	n.a.	n.a.	0.00	0.00
27.887	8.660	0.340	3421.5	2617.3	5.310	4.895	3.34		Clay	64.6			8.19	0.95	n.a.	n.a.	0.88	0.475	n.a.	n.a.	n.a.	n.a.	0.00	0.00
28.051	9.210	0.329	3441.1	2626.7	5.702	4.397	3.29		Clay	62.0			8.71	0.94	n.a.	n.a.	0.88	0.475	n.a.	n.a.	n.a.	n.a.	0.00	0.00
28.215	10.630	0.342	3460.8	2636.2	6.752	3.847	3.20		Clay	57.6			10.05	0.94	n.a.	n.a.	0.88	0.475	n.a.	n.a.	n.a.	n.a.	0.00	0.00
28.379	10.840	0.348	3480.5	2645.6	6.879	3.820	3.19		Clay	57.2			10.25	0.94	n.a.	n.a.	0.88	0.475	n.a.	n.a.	n.a.	n.a.	0.00	0.00
28.543	11.280	0.576	3500.2	2655.1	7.179	6.039	3.29		Clay	62.0			10.66	0.94	n.a.	n.a.	0.88	0.475	n.a.	n.a.	n.a.	n.a.	0.00	0.00
28.707	42.450	0.723	3519.9	2664.5	34.273	1.777	2.43		Sand	28.2	86.93		86.93	0.91	78.69	133.16	0.88	0.475	0.968	0.212	0.240	0.50	0.02	0.05
28.871	91.130	0.833	3539.6	2674.0	75.134	0.932	1.99		Sand	16.7			86.13	0.90	77.26	115.94	0.88	0.475	0.972	0.171	0.195	0.41	0.03	0.05
29.035	91.970	0.635	3559.3	2683.4	75.698	0.704	1.92		Sand	15.2			86.93	0.89	77.69	111.76	0.88	0.475	0.972	0.163	0.186	0.39	0.03	0.06
29.199	91.210	0.589	3578.9	2692.9	74.920	0.658	1.90		Sand	14.9			86.21	0.89	76.84	109.87	0.88	0.475	0.972	0.160	0.182	0.38	0.03	0.06
29.364	90.840	0.494	3598.6	2702.3	74.472	0.554	1.87		Sand	14.2			85.86	0.89	76.27	106.49	0.88	0.475	0.973	0.154	0.175	0.37	0.03	0.06
29.528	90.150	0.495	3618.3	2711.8	73.757	0.560	1.87		Sand	14.3			85.21	0.89	75.55	106.07	0.87	0.475	0.972	0.153	0.174	0.37	0.03	0.06
29.692	77.990	0.906	3638.0	2721.2	63.486	1.189	2.11		Sand	19.5			73.71	0.89	65.28	106.98	0.87	0.475	0.972	0.154	0.176	0.37	0.03	0.06
29.856	60.550	1.146	3657.7	2730.7	48.857	1.951	2.34		Sand	25.4			57.23	0.88	50.22	93.80	0.87	0.475	0.974	0.133	0.151	0.32	0.03	0.07
30.020	52.540	1.037	3677.4	2740.1	42.112	2.045	2.40		Sand	27.2			49.66	0.87	43.28	85.64	0.87	0.475	0.975	0.121	0.138	0.29	0.04	0.07
30.184	49.830	0.738	3697.0	2749.6	39.784	1.537	2.34		Sand	25.5			47.10	0.87	40.86	81.54	0.87							

Depth (ft)	q <sub>c</sub> (tsf)	f <sub>s</sub> (tsf)	σ <sub>vc</sub> (psf)	In situ σ <sub>vc</sub> (psf)	Q	F (%)	l <sub>c</sub>	Layer "Plastic" PI > 7	Flag Soil Type	Fines (%)	Q <sub>cN</sub> near interfaces (soft layer)	Thin Layer Factor (K <sub>tl</sub> )	Interpreted q <sub>cN</sub>	C <sub>N</sub>	q <sub>c1N</sub>	q <sub>c1N-CS</sub>	Stress Reduction Coeff. r <sub>d</sub>	CSR	K <sub>σ</sub> for Sand	CRR <sub>M=7.5</sub> σ <sub>vc</sub> = 1 atm	CRR	Factor of Safety (CRR/CSR)	Vertical Strain ε <sub>v</sub>	Settlement (Inches)
31.660	98.490	1.100	3874.2	2834.6	78.848	1.139	2.03		Sand	17.6			93.09	0.88	81.61	123.50	0.86	0.475	0.963	0.187	0.211	0.44	0.03	0.05
31.824	107.120	1.366	3893.9	2844.1	85.745	1.299	2.03		Sand	17.8			101.25	0.88	89.11	133.36	0.86	0.475	0.959	0.212	0.238	0.50	0.02	0.05
31.988	82.430	1.965	3913.6	2853.5	65.499	2.442	2.31		Sand	24.6			77.91	0.87	67.82	116.38	0.86	0.475	0.964	0.172	0.194	0.41	0.03	0.05
32.152	77.090	2.002	3933.3	2863.0	61.043	2.665	2.35		Sand	26.0			72.86	0.87	63.13	111.21	0.86	0.475	0.965	0.162	0.183	0.39	0.03	0.06
32.316	129.460	2.023	3953.0	2872.4	103.420	1.587	2.03		Sand	17.7			122.36	0.89	108.59	157.69	0.86	0.475	0.948	0.312	0.346	0.73	0.02	0.03
32.480	152.470	2.216	3972.6	2881.9	121.878	1.473	1.96		Sand	16.1			144.11	0.89	128.91	177.47	0.86	0.475	0.936	0.497	0.545	1.15	0.01	0.01
32.644	197.970	2.476	3992.3	2891.3	158.461	1.264	1.83		Sand	13.5			187.12	0.91	169.74	213.35	0.86	0.474	0.906	2.000	2.123	4.48	0.00	0.00
32.808	174.110	2.340	4012.0	2900.8	138.933	1.359	1.90		Sand	14.8			164.57	0.90	147.98	194.59	0.86	0.474	0.922	0.899	0.971	2.05	0.00	0.00
32.972	110.550	2.086	4031.7	2910.2	87.070	1.931	2.15		Sand	20.4	187.12		187.12	0.92	171.45	244.69	0.86	0.474	0.904	2.000	2.119	4.47	0.00	0.00
33.136	61.930	2.446	4051.4	2919.7	41.035	4.083	2.61		Clay	33.8			58.53	0.92	n.a.	n.a.	0.85	0.474	n.a.	n.a.	n.a.	n.a.	0.00	0.00
33.301	49.180	2.381	4071.1	2929.1	32.190	5.050	2.75		Clay	38.8			46.48	0.92	n.a.	n.a.	0.85	0.474	n.a.	n.a.	n.a.	n.a.	0.00	0.00
33.465	63.840	2.079	4090.7	2938.6	49.563	3.365	2.49		Sand	30.0	110.99	1.66	184.24	0.92	168.95	254.56	0.85	0.474	0.901	2.000	2.112	4.46	0.00	0.00
33.629	117.430	2.087	4110.4	2948.0	92.389	1.809	2.11		Sand	19.5		1.66	184.25	0.91	167.76	237.44	0.85	0.474	0.901	2.000	2.110	4.45	0.00	0.00
33.793	97.550	2.578	4130.1	2957.5	76.339	2.699	2.29		Sand	24.2		1.66	153.06	0.90	137.52	207.48	0.85	0.474	0.904	1.651	1.748	3.69	0.00	0.00
33.957	69.850	2.720	4149.8	2966.9	54.099	4.014	2.52		Sand	30.9		1.66	109.59	0.88	96.03	157.56	0.85	0.474	0.942	0.311	0.343	0.72	0.02	0.03
34.121	86.910	2.154	4169.5	2976.4	67.601	2.539	2.31		Sand	24.7		1.66	136.36	0.89	121.10	186.50	0.85	0.473	0.923	0.662	0.715	1.51	0.00	0.00
34.285	121.080	0.987	4189.2	2985.8	94.675	0.829	1.88		Sand	14.4		1.66	189.97	0.90	171.13	220.37	0.85	0.473	0.897	2.000	2.101	4.44	0.00	0.00
34.449	70.090	1.928	4208.9	2995.3	54.010	2.836	2.41		Sand	27.6	114.44	1.66	189.97	0.91	173.33	258.55	0.85	0.473	0.896	2.000	2.099	4.43	0.00	0.00
34.613	39.430	1.765	4228.5	3004.7	24.838	4.729	2.81		Clay	41.1			37.27	0.91	n.a.	n.a.	0.85	0.473	n.a.	n.a.	n.a.	n.a.	0.00	0.00
34.777	31.360	1.643	4248.2	3014.1	19.399	5.619	2.94		Clay	46.2			29.64	0.91	n.a.	n.a.	0.84	0.473	n.a.	n.a.	n.a.	n.a.	0.00	0.00
34.941	26.630	1.267	4267.9	3023.6	16.203	5.171	2.97		Clay	47.6			25.17	0.91	n.a.	n.a.	0.84	0.473	n.a.	n.a.	n.a.	n.a.	0.00	0.00
35.105	26.400	1.010	4287.6	3033.0	15.995	4.164	2.92		Clay	45.4			24.95	0.91	n.a.	n.a.	0.84	0.473	n.a.	n.a.	n.a.	n.a.	0.00	0.00
35.269	23.000	0.776	4307.3	3042.5	13.703	3.722	2.94		Clay	46.3			21.74	0.91	n.a.	n.a.	0.84	0.472	n.a.	n.a.	n.a.	n.a.	0.00	0.00
35.433	21.390	0.739	4327.0	3051.9	12.600	3.845	2.98		Clay	47.8			20.22	0.91	n.a.	n.a.	0.84	0.472	n.a.	n.a.	n.a.	n.a.	0.00	0.00
35.597	19.700	0.844	4346.7	3061.4	11.450	4.815	3.07		Clay	51.8			18.62	0.91	n.a.	n.a.	0.84	0.472	n.a.	n.a.	n.a.	n.a.	0.00	0.00
35.761	20.690	0.976	4366.3	3070.8	12.053	5.273	3.08		Clay	52.1			19.56	0.91	n.a.	n.a.	0.84	0.472	n.a.	n.a.	n.a.	n.a.	0.00	0.00
35.925	23.320	1.275	4386.0	3080.3	13.718	6.034	3.07		Clay	51.9			22.04	0.91	n.a.	n.a.	0.84	0.472	n.a.	n.a.	n.a.	n.a.	0.00	0.00
36.089	28.970	1.331	4405.7	3089.7	17.326	4.971	2.94		Clay	46.3			27.38	0.90	n.a.	n.a.	0.84	0.472	n.a.	n.a.	n.a.	n.a.	0.00	0.00
36.253	32.480	1.373	4425.4	3099.2	19.532	4.535	2.88		Clay	43.6			30.70	0.90	n.a.	n.a.	0.84	0.471	n.a.	n.a.	n.a.	n.a.	0.00	0.00
36.417	42.650	1.146	4445.1	3108.6	26.010	2.835	2.65		Clay	35.3			40.31	0.90	n.a.	n.a.	0.84	0.471	n.a.	n.a.	n.a.	n.a.	0.00	0.00
36.581	72.290	0.599	4464.8	3118.1	54.549	0.855	2.08		Sand	18.8		1.8	122.99	0.86	105.64	156.81	0.83	0.471	0.934	0.306	0.335	0.71	0.02	0.03
36.745	66.480	0.731	4484.4	3127.5	49.941	1.138	2.18		Sand	21.3	68.33	1.8	122.99	0.86	105.86	162.08	0.83	0.471	0.930	0.340	0.371	0.79	0.01	0.03
36.909	47.770	1.381	4504.1	3137.0	29.020	3.034	2.63		Clay	34.7			45.15	0.90	n.a.	n.a.	0.83	0.471	n.a.	n.a.	n.a.	n.a.	0.00	0.00
37.073	38.700	1.287	4523.8	3146.4	23.162	3.531	2.75		Clay	38.8			36.58	0.90	n.a.	n.a.	0.83	0.471	n.a.	n.a.	n.a.	n.a.	0.00	0.00
37.238	64.050	1.491	4543.5	3155.9	47.813	2.414	2.40		Sand	27.4	329.58		329.58	0.90	296.59	421.90	0.83	0.470	0.880	2.000	2.062	4.38	0.00	0.00
37.402	90.130	1.767	4563.2	3165.3	67.889	2.012	2.24		Sand	22.7	329.58		329.58	0.90	296.36	412.46	0.83	0.470	0.879	2.000	2.060	4.38	0.00	0.00
37.566	165.020	1.720	4582.9	3174.8	125.568	1.057	1.85		Sand	13.9	329.58		329.58	0.90	296.13	364.58	0.83	0.470	0.878	2.000	2.058	4.38	0.00	0.00
37.730	279.390	1.591	4602.6	3184.2	213.496	0.574	1.50		Sand	8.1	329.58		329.58	0.90	295.89	305.24	0.83	0.470	0.877	2.000	2.056	4.38	0.00	0.00
37.894	330.950	1.916	4622.2	3193.7	252.840	0.583	1.45		Sand	7.4	329.58		329.58	0.90	295.66	300.70	0.83	0.469	0.877	2.000	2.053	4.37	0.00	0.00
38.058	348.700	1.443	4641.9	3203.1	266.095	0.417	1.34		Sand	6.0	329.58		329.58	0.90	295.44	296.10	0.83	0.469	0.876	2.000	2.051	4.37	0.00	0.00
38.222	331.490	1.236	4661.6	3212.6	252.494	0.375	1.33		Sand	5.9			313.32	0.90	280.64	281.14	0.82	0.469	0.875	2.000	2.049	4.37	0.00	0.00
38.386	319.770	0.922	4681.3	3222.0	243.139	0.291	1.28		Sand	5.3			302.24	0.89	270.50	270.63	0.82	0.469	0.874	2.000	2.047	4.37	0.00	0.00
38.550	253.070	1.373	4701.0	3231.5	191.761	0.548	1.53		Sand	8.4			239.20	0.88	210.26	219.46	0.82	0.469	0.873	2.000	2.045	4.36	0.00	0.00
38.714	206.430	1.439	4720.7	3240.9	155.853	0.705	1.67		Sand	10.5			195.11	0.86	168.66	190.96	0.82	0.468	0.899	0.779	0.820	1.75	0.00	0.00
38.878	182.700	1.302	4740.4	3250.4	137.522	0.722	1.71		Sand	11.4			172.68	0.85	147.54	173.56	0.82	0.468	0.915	0.446	0.478	1.02	0.01	0.01
39.042	176.920	1.538	4760.0	3259.8	132.914	0.881	1.78		Sand	12.5			167.22	0.85	142.96	176.15	0.82	0.468	0.912	0.479	0.512	1.09	0.01	0.01
39.206	184.610	2.097	4779.7	3269.3	138.562	1.151	1.85		Sand	13.8			174.49	0.86	150.50	192.23	0.82	0.468	0.895	0.818	0.858	1.83	0.00	0.00
39.370	215.210	2.909	4799.4	3278.7	161.589	1.367	1.85		Sand	13.9			203.41	0.88	178.66	226.17	0.82	0.467	0.869	2.000	2.035	4.35	0.00	0.00
39.534	263.800	2.911	4819.1	3288.2	198.192	1.114	1.73		Sand	11.6			249.34	0.89	221.96	258.22	0.82	0.467	0.868	2.000	2.033	4.35	0.00	0.00
39.698	285.700	2.403	4838.8	3297.6	214.481	0.848	1.62		Sand	9.8			270.04	0.89	240.21	261.58	0.82	0.467	0.867	2.000	2.031	4.35	0.00	0.00
39.862	329.290	2.731	4858.5	3307.1	247.123	0.835	1.57		Sand	9.0			311.24	0.89	276.65	293.36	0.82	0.467	0.866	2.000	2.029	4.35	0.00	0.00
40.026	357.650	4.386	4878.1	3316.5	268.175	1.235	1.67		Sand	10.7</														

Depth (ft)	q <sub>c</sub> (tsf)	f <sub>s</sub> (tsf)	σ <sub>vc</sub> (psf)	In situ σ'vc (psf)	Q	F (%)	lc	Layer "Plastic" PI > 7	Flag Soil Type	Fines (%)	q <sub>c-N</sub> near interfaces (soft layer)	Thin Layer Factor (K <sub>tl</sub> )	Interpreted q <sub>c-N</sub>	C <sub>N</sub>	q <sub>c1N</sub>	q <sub>c1N-CS</sub>	Stress Reduction Coeff. r <sub>d</sub>	CSR	K <sub>σ</sub> for Sand	CRR <sub>M=7.5</sub> σ'vc = 1 atm	CRR	Factor of Safety (CRR/CSR)	Vertical Strain ε <sub>v</sub>	Settlement (Inches)
42.159	303.320	1.128	5134.1	3439.3	222.969	0.375	1.37		Sand	6.4			286.69	0.88	252.12	253.34	0.80	0.463	0.854	2.000	2.001	4.32	0.00	0.00
42.323	323.110	1.435	5153.7	3448.8	237.307	0.448	1.40		Sand	6.7			305.40	0.88	268.47	270.49	0.80	0.463	0.853	2.000	1.999	4.32	0.00	0.00
42.487	260.520	2.492	5173.4	3458.2	190.700	0.966	1.69		Sand	11.0	305.4		305.40	0.88	268.28	304.14	0.80	0.462	0.853	2.000	1.998	4.32	0.00	0.00
42.651	162.700	3.722	5193.1	3467.7	118.210	2.325	2.11		Sand	19.6	305.4		305.40	0.88	268.08	365.81	0.80	0.462	0.852	2.000	1.996	4.32	0.00	0.00
42.815	68.530	3.259	5212.8	3477.1	37.918	4.944	2.69		Clay	36.7			64.77	0.88	n.a.	n.a.	0.80	0.462	n.a.	n.a.	n.a.	n.a.	0.00	0.00
42.979	25.710	1.838	5232.5	3486.6	13.247	7.959	3.16		Clay	55.9			24.30	0.88	n.a.	n.a.	0.80	0.461	n.a.	n.a.	n.a.	n.a.	0.00	0.00
43.143	18.540	0.795	5252.2	3496.0	9.104	4.996	3.16		Clay	55.8			17.52	0.88	n.a.	n.a.	0.80	0.461	n.a.	n.a.	n.a.	n.a.	0.00	0.00
43.307	17.040	0.644	5271.9	3505.5	8.218	4.474	3.17		Clay	56.1			16.11	0.88	n.a.	n.a.	0.80	0.461	n.a.	n.a.	n.a.	n.a.	0.00	0.00
43.471	16.130	0.605	5291.5	3514.9	7.673	4.487	3.19		Clay	57.2			15.25	0.87	n.a.	n.a.	0.79	0.461	n.a.	n.a.	n.a.	n.a.	0.00	0.00
43.635	16.160	0.546	5311.2	3524.4	7.663	4.041	3.17		Clay	56.0			15.27	0.87	n.a.	n.a.	0.79	0.460	n.a.	n.a.	n.a.	n.a.	0.00	0.00
43.799	14.730	0.519	5330.9	3533.8	6.828	4.304	3.22		Clay	58.7			13.92	0.87	n.a.	n.a.	0.79	0.460	n.a.	n.a.	n.a.	n.a.	0.00	0.00
43.963	14.730	0.536	5350.6	3543.3	6.804	4.446	3.23		Clay	59.1			13.92	0.87	n.a.	n.a.	0.79	0.460	n.a.	n.a.	n.a.	n.a.	0.00	0.00
44.127	15.290	0.586	5370.3	3552.7	7.096	4.645	3.23		Clay	58.9			15.45	0.87	n.a.	n.a.	0.79	0.459	n.a.	n.a.	n.a.	n.a.	0.00	0.00
44.291	15.960	0.640	5390.0	3562.2	7.448	4.827	3.22		Clay	58.6			14.09	0.87	n.a.	n.a.	0.79	0.459	n.a.	n.a.	n.a.	n.a.	0.00	0.00
44.455	16.940	0.685	5409.6	3571.6	7.971	4.814	3.20		Clay	57.4			16.01	0.87	n.a.	n.a.	0.79	0.459	n.a.	n.a.	n.a.	n.a.	0.00	0.00
44.619	16.600	0.716	5429.3	3581.1	7.755	5.153	3.22		Clay	58.7			15.69	0.87	n.a.	n.a.	0.79	0.458	n.a.	n.a.	n.a.	n.a.	0.00	0.00
44.783	17.710	0.730	5449.0	3590.5	8.347	4.869	3.18		Clay	56.8			16.74	0.87	n.a.	n.a.	0.79	0.458	n.a.	n.a.	n.a.	n.a.	0.00	0.00
44.948	19.760	0.848	5468.7	3600.0	9.459	4.979	3.15		Clay	55.1			18.68	0.87	n.a.	n.a.	0.79	0.458	n.a.	n.a.	n.a.	n.a.	0.00	0.00
45.112	24.850	1.040	5488.4	3609.4	12.249	4.703	3.04		Clay	50.5			23.49	0.87	n.a.	n.a.	0.78	0.457	n.a.	n.a.	n.a.	n.a.	0.00	0.00
45.276	31.100	1.213	5508.1	3618.9	15.666	4.281	2.93		Clay	45.9			29.40	0.87	n.a.	n.a.	0.78	0.457	n.a.	n.a.	n.a.	n.a.	0.00	0.00
45.440	31.910	1.276	5527.8	3628.3	16.066	4.378	2.93		Clay	45.9			30.16	0.87	n.a.	n.a.	0.78	0.457	n.a.	n.a.	n.a.	n.a.	0.00	0.00
45.604	32.780	0.935	5547.4	3637.8	16.497	3.116	2.83		Clay	41.9			30.98	0.87	n.a.	n.a.	0.78	0.457	n.a.	n.a.	n.a.	n.a.	0.00	0.00
45.768	27.330	0.810	5567.1	3647.2	13.460	3.300	2.92		Clay	45.2			25.83	0.87	n.a.	n.a.	0.78	0.456	n.a.	n.a.	n.a.	n.a.	0.00	0.00
45.932	20.810	0.864	5586.8	3656.7	9.854	4.794	3.12		Clay	54.0			19.67	0.87	n.a.	n.a.	0.78	0.456	n.a.	n.a.	n.a.	n.a.	0.00	0.00
46.096	19.190	0.964	5606.5	3666.1	8.940	5.882	3.21		Clay	58.1			18.14	0.87	n.a.	n.a.	0.78	0.456	n.a.	n.a.	n.a.	n.a.	0.00	0.00
46.260	26.670	1.112	5626.2	3675.6	12.981	4.659	3.02		Clay	49.6			25.21	0.86	n.a.	n.a.	0.78	0.455	n.a.	n.a.	n.a.	n.a.	0.00	0.00
46.424	25.480	1.226	5645.9	3685.0	12.297	5.411	3.08		Clay	52.1			24.08	0.86	n.a.	n.a.	0.78	0.455	n.a.	n.a.	n.a.	n.a.	0.00	0.00
46.588	25.260	1.262	5665.6	3694.5	12.141	5.625	3.09		Clay	52.8			23.88	0.86	n.a.	n.a.	0.78	0.455	n.a.	n.a.	n.a.	n.a.	0.00	0.00
46.752	29.050	1.330	5685.2	3703.9	14.151	5.076	3.01		Clay	49.3			27.46	0.86	n.a.	n.a.	0.78	0.454	n.a.	n.a.	n.a.	n.a.	0.00	0.00
46.916	30.410	1.482	5704.9	3713.4	14.842	5.376	3.01		Clay	49.3			28.74	0.86	n.a.	n.a.	0.77	0.454	n.a.	n.a.	n.a.	n.a.	0.00	0.00
47.080	32.090	1.463	5724.6	3722.8	15.702	5.006	2.98		Clay	47.7			30.33	0.86	n.a.	n.a.	0.77	0.454	n.a.	n.a.	n.a.	n.a.	0.00	0.00
47.244	33.260	1.539	5744.3	3732.3	16.284	5.063	2.97		Clay	47.3			31.44	0.86	n.a.	n.a.	0.77	0.453	n.a.	n.a.	n.a.	n.a.	0.00	0.00
47.408	36.510	1.584	5764.0	3741.7	17.975	4.710	2.91		Clay	45.2			34.51	0.86	n.a.	n.a.	0.77	0.453	n.a.	n.a.	n.a.	n.a.	0.00	0.00
47.572	36.810	1.658	5783.7	3751.2	18.084	4.887	2.92		Clay	45.5			34.79	0.86	n.a.	n.a.	0.77	0.453	n.a.	n.a.	n.a.	n.a.	0.00	0.00
47.736	35.310	1.545	5803.3	3760.6	17.236	4.768	2.93		Clay	45.9			33.37	0.86	n.a.	n.a.	0.77	0.452	n.a.	n.a.	n.a.	n.a.	0.00	0.00
47.900	29.480	1.540	5823.0	3770.1	14.094	5.797	3.05		Clay	51.0			27.86	0.86	n.a.	n.a.	0.77	0.452	n.a.	n.a.	n.a.	n.a.	0.00	0.00
48.064	27.810	1.422	5842.7	3779.5	13.170	5.714	3.07		Clay	51.8			26.29	0.86	n.a.	n.a.	0.77	0.451	n.a.	n.a.	n.a.	n.a.	0.00	0.00
48.228	23.110	1.238	5862.4	3789.0	10.651	6.134	3.16		Clay	55.8			21.84	0.86	n.a.	n.a.	0.77	0.451	n.a.	n.a.	n.a.	n.a.	0.00	0.00
48.392	20.810	1.008	5882.1	3798.4	9.409	5.643	3.18		Clay	56.7			19.67	0.86	n.a.	n.a.	0.77	0.451	n.a.	n.a.	n.a.	n.a.	0.00	0.00
48.556	21.350	1.030	5901.8	3807.9	9.664	5.598	3.17		Clay	56.2			20.18	0.86	n.a.	n.a.	0.77	0.450	n.a.	n.a.	n.a.	n.a.	0.00	0.00
48.720	20.950	0.979	5921.5	3817.3	9.425	5.443	3.17		Clay	56.3			19.80	0.86	n.a.	n.a.	0.76	0.450	n.a.	n.a.	n.a.	n.a.	0.00	0.00
48.885	19.740	0.869	5941.1	3826.7	8.764	5.181	3.18		Clay	56.8			18.66	0.86	n.a.	n.a.	0.76	0.450	n.a.	n.a.	n.a.	n.a.	0.00	0.00
49.049	19.290	0.824	5960.8	3836.2	8.503	5.055	3.19		Clay	57.0			18.23	0.85	n.a.	n.a.	0.76	0.449	n.a.	n.a.	n.a.	n.a.	0.00	0.00
49.213	20.360	0.869	5980.5	3845.6	9.033	5.004	3.16		Clay	55.9			19.24	0.85	n.a.	n.a.	0.76	0.449	n.a.	n.a.	n.a.	n.a.	0.00	0.00
49.377	21.800	0.846	6000.2	3855.1	9.753	4.502	3.11		Clay	53.4			20.60	0.85	n.a.	n.a.	0.76	0.449	n.a.	n.a.	n.a.	n.a.	0.00	0.00
49.541	23.160	0.860	6019.9	3864.5	10.428	4.266	3.07		Clay	51.8			21.89	0.85	n.a.	n.a.	0.76	0.448	n.a.	n.a.	n.a.	n.a.	0.00	0.00
49.705	21.410	0.884	6039.6	3874.0	9.494	4.809	3.14		Clay	54.6			20.24	0.85	n.a.	n.a.	0.76	0.448	n.a.	n.a.	n.a.	n.a.	0.00	0.00
49.869	24.520	0.769	6059.3	3883.4	11.068	3.579	3.01		Clay	48.9			23.18	0.85	n.a.	n.a.	0.76	0.448	n.a.	n.a.	n.a.	n.a.	0.00	0.00
50.033	22.160	0.728	6078.9	3892.9	9.823	3.806	3.06		Clay	51.4			20.95	0.85	n.a.	n.a.	0.76	0.447	n.a.	n.a.	n.a.	n.a.	0.00	0.00
50.197	21.400	0.739	6098.6	3902.3	9.405	4.026	3.09		Clay	52.7			20.23	0.85	n.a.	n.a.	0.76	0.447	n.a.	n.a.	n.a.	n.a.	0.00	0.00
50.361	21.100	0.810	6118.3	3911.8	9.224	4.492	3.13		Clay	54.3			19.94	0.85	n.a.	n.a.	0.76	0.447	n.a.	n.a.	n.a.	n.a.	0.00	0.00
50.525	22.090	0.928	6138.0	3921.2	9.702	4.880	3.13		Clay	54.5			20.88	0.85	n.a.	n.a.	0.75	0.446	n.a.	n.a.	n.a.	n.a.	0.00	0.00
50.689	25.480	0.925	6157.7	3930.7	11.398	4.131	3.03		Clay	50.1			24.08	0.85	n.a.	n.a.	0.75	0.446	n.a.	n.a.	n.a.	n.a.	0.00	0.00
50.853	26.110	0.794	6177.4	3940.1	11.686	3.447	2.98		Clay	47.7			24.68	0.85	n.a.	n.a.	0.75	0.445	n.a.	n.a.	n.a.	n.a.	0.00	0.00
51.017	23.060	0.609	6197.0	3949.6	10.108	3.048	3.00		Clay	48.6			21.80	0.85	n.a.	n.a.	0.75	0.445	n.a.	n.a.	n.a.	n.a.	0.00	0.00
51.181	20.100	0.696	6216.7	3959.0	8.584	4.094	3.13		Clay	54.3			19.00	0.85	n.a.	n.a.	0.75	0.445	n.a.	n.a.	n.a.	n.a.	0.00	0.00

Depth (ft)	q <sub>c</sub> (tsf)	f <sub>s</sub> (tsf)	σ <sub>vc</sub> (psf)	In situ σ' <sub>vc</sub> (psf)	Q	F (%)	l <sub>c</sub>	Layer "Plastic" PI > 7	Flag Soil Type	Fines (%)	q <sub>c</sub> N near interfaces (soft layer)	Thin Layer Factor (K <sub>tl</sub> )	Interpreted q <sub>c</sub> N	C <sub>N</sub>	q <sub>c</sub> 1N	q <sub>c</sub> 1N-CS	Stress Reduction Coeff. r <sub>d</sub>	CSR	K <sub>σ</sub> for Sand	CRRM=7.5, σ'vc = 1 atm	CRR	Factor of Safety (CRR/CSR)	Vertical Strain ε <sub>v</sub>	Settlement (Inches)
52.657	17.490	0.624	6393.9	4044.1	7.069	4.369	3.21		Clay	58.3			16.53	0.84	n.a.	n.a.	0.74	0.441	n.a.	n.a.	n.a.	n.a.	0.00	0.00
52.822	17.130	0.586	6413.6	4053.5	6.870	4.207	3.21		Clay	58.3			16.19	0.84	n.a.	n.a.	0.74	0.441	n.a.	n.a.	n.a.	n.a.	0.00	0.00
52.986	16.530	0.578	6433.3	4063.0	6.554	4.341	3.24		Clay	59.5			15.62	0.84	n.a.	n.a.	0.74	0.441	n.a.	n.a.	n.a.	n.a.	0.00	0.00
53.150	16.980	0.573	6453.0	4072.4	6.754	4.169	3.22		Clay	58.5			16.05	0.84	n.a.	n.a.	0.74	0.440	n.a.	n.a.	n.a.	n.a.	0.00	0.00
53.314	17.520	0.574	6472.6	4081.9	6.999	4.015	3.20		Clay	57.4			16.56	0.84	n.a.	n.a.	0.74	0.440	n.a.	n.a.	n.a.	n.a.	0.00	0.00
53.478	17.390	0.526	6492.3	4091.3	6.914	3.717	3.18		Clay	56.8			16.44	0.84	n.a.	n.a.	0.74	0.440	n.a.	n.a.	n.a.	n.a.	0.00	0.00
53.642	15.690	0.461	6512.0	4100.8	6.064	3.706	3.23		Clay	58.9			14.83	0.84	n.a.	n.a.	0.74	0.439	n.a.	n.a.	n.a.	n.a.	0.00	0.00
53.806	13.630	0.383	6531.7	4110.2	5.043	3.696	3.29		Clay	62.1			12.88	0.84	n.a.	n.a.	0.74	0.439	n.a.	n.a.	n.a.	n.a.	0.00	0.00
53.970	12.860	0.335	6551.4	4119.7	4.653	3.497	3.31		Clay	63.0			12.16	0.84	n.a.	n.a.	0.74	0.438	n.a.	n.a.	n.a.	n.a.	0.00	0.00
54.134	13.070	0.326	6571.1	4129.1	4.739	3.331	3.29		Clay	62.1			12.35	0.84	n.a.	n.a.	0.73	0.438	n.a.	n.a.	n.a.	n.a.	0.00	0.00
54.298	13.740	0.317	6590.7	4138.6	5.047	3.032	3.25		Clay	59.9			12.99	0.84	n.a.	n.a.	0.73	0.438	n.a.	n.a.	n.a.	n.a.	0.00	0.00
54.462	14.100	0.481	6610.4	4148.0	5.205	4.458	3.33		Clay	63.8			13.33	0.84	n.a.	n.a.	0.73	0.437	n.a.	n.a.	n.a.	n.a.	0.00	0.00
54.626	23.360	0.567	6630.1	4157.5	9.643	2.830	3.00		Clay	48.5			22.08	0.84	n.a.	n.a.	0.73	0.437	n.a.	n.a.	n.a.	n.a.	0.00	0.00
54.790	24.770	0.564	6649.8	4166.9	10.293	2.631	2.95		Clay	46.8			23.41	0.84	n.a.	n.a.	0.73	0.437	n.a.	n.a.	n.a.	n.a.	0.00	0.00
54.954	24.480	0.523	6669.5	4176.4	10.126	2.474	2.95		Clay	46.5			23.14	0.84	n.a.	n.a.	0.73	0.436	n.a.	n.a.	n.a.	n.a.	0.00	0.00
55.118	22.090	0.806	6689.2	4185.8	8.957	4.301	3.13		Clay	54.2			20.88	0.84	n.a.	n.a.	0.73	0.436	n.a.	n.a.	n.a.	n.a.	0.00	0.00
55.282	30.610	1.157	6708.9	4195.3	12.994	4.244	2.99		Clay	48.5			28.93	0.83	n.a.	n.a.	0.73	0.435	n.a.	n.a.	n.a.	n.a.	0.00	0.00
55.446	41.730	1.111	6728.5	4204.7	18.249	2.895	2.78		Clay	39.8			39.44	0.83	n.a.	n.a.	0.73	0.435	n.a.	n.a.	n.a.	n.a.	0.00	0.00
55.610	34.480	1.596	6748.2	4214.1	14.763	5.131	3.00		Clay	48.9			32.59	0.83	n.a.	n.a.	0.73	0.435	n.a.	n.a.	n.a.	n.a.	0.00	0.00
55.774	49.270	1.781	6767.9	4223.6	21.728	3.880	2.80		Clay	40.6			46.57	0.83	n.a.	n.a.	0.73	0.434	n.a.	n.a.	n.a.	n.a.	0.00	0.00
55.938	107.650	2.140	6787.6	4233.0	69.670	2.053	2.23		Sand	22.7	113.66	1.55	176.17	0.80	141.54	210.58	0.72	0.434	0.793	1.960	1.820	4.20	0.00	
56.102	120.250	2.236	6807.3	4242.5	77.997	1.914	2.18		Sand	21.2		1.55	176.17	0.80	141.02	207.28	0.72	0.433	0.801	1.633	1.531	3.53	0.00	
56.266	114.580	2.610	6827.0	4251.9	74.123	2.348	2.26		Sand	23.2		1.55	167.86	0.80	133.50	200.95	0.72	0.433	0.815	1.189	1.135	2.62	0.00	
56.430	117.230	3.065	6846.7	4261.4	75.799	2.693	2.29		Sand	24.2		1.55	171.75	0.80	137.27	207.20	0.72	0.433	0.799	1.627	1.523	3.52	0.00	
56.594	138.940	2.606	6866.3	4270.8	90.152	1.923	2.13		Sand	20.1		1.55	203.55	0.82	166.99	238.20	0.72	0.432	0.789	2.000	1.849	4.28	0.00	
56.759	161.940	1.735	6886.0	4280.3	105.331	1.095	1.92		Sand	15.2		1.55	237.25	0.83	197.01	256.16	0.72	0.432	0.789	2.000	1.848	4.28	0.00	
56.923	176.610	1.228	6905.7	4289.7	114.947	0.709	1.77		Sand	12.4		1.55	258.74	0.83	214.73	256.73	0.72	0.432	0.788	2.000	1.846	4.28	0.00	
57.087	157.570	0.943	6925.4	4299.2	102.189	0.612	1.77		Sand	12.4	166.93	1.55	258.74	0.83	214.61	257.19	0.72	0.431	0.787	2.000	1.845	4.28	0.00	
57.251	108.350	1.473	6945.1	4308.6	69.468	1.404	2.13		Sand	19.9	166.93	1.55	258.74	0.83	214.48	298.39	0.72	0.431	0.787	2.000	1.843	4.28	0.00	
57.415	51.710	1.480	6964.8	4318.1	22.337	3.070	2.72		Clay	37.9			48.88	0.83	n.a.	n.a.	0.72	0.430	n.a.	n.a.	n.a.	n.a.	0.00	0.00
57.579	32.980	1.183	6984.4	4327.5	13.628	4.011	2.96		Clay	47.2			31.17	0.83	n.a.	n.a.	0.72	0.430	n.a.	n.a.	n.a.	n.a.	0.00	0.00
57.743	25.430	0.863	7004.1	4337.0	10.112	3.937	3.06		Clay	51.3			24.04	0.83	n.a.	n.a.	0.71	0.430	n.a.	n.a.	n.a.	n.a.	0.00	0.00
57.907	22.970	0.766	7023.8	4346.4	8.954	3.935	3.10		Clay	53.2			21.71	0.83	n.a.	n.a.	0.71	0.429	n.a.	n.a.	n.a.	n.a.	0.00	0.00
58.071	21.710	0.718	7043.5	4355.9	8.351	3.950	3.13		Clay	54.4			20.52	0.83	n.a.	n.a.	0.71	0.429	n.a.	n.a.	n.a.	n.a.	0.00	0.00
58.235	20.650	0.689	7063.2	4365.3	7.843	4.027	3.16		Clay	55.6			19.52	0.83	n.a.	n.a.	0.71	0.429	n.a.	n.a.	n.a.	n.a.	0.00	0.00
58.399	19.010	0.672	7082.9	4374.8	7.072	4.341	3.21		Clay	58.2			17.97	0.83	n.a.	n.a.	0.71	0.428	n.a.	n.a.	n.a.	n.a.	0.00	0.00
58.563	17.870	0.616	7102.6	4384.2	6.532	4.300	3.24		Clay	59.4			16.89	0.83	n.a.	n.a.	0.71	0.428	n.a.	n.a.	n.a.	n.a.	0.00	0.00
58.727	17.290	0.615	7122.2	4393.7	6.249	4.478	3.26		Clay	60.6			16.34	0.82	n.a.	n.a.	0.71	0.427	n.a.	n.a.	n.a.	n.a.	0.00	0.00
58.891	16.980	0.579	7141.9	4403.1	6.091	4.316	3.26		Clay	60.7			16.05	0.82	n.a.	n.a.	0.71	0.427	n.a.	n.a.	n.a.	n.a.	0.00	0.00
59.055	17.050	0.570	7161.6	4412.6	6.105	4.233	3.26		Clay	60.4			16.12	0.82	n.a.	n.a.	0.71	0.427	n.a.	n.a.	n.a.	n.a.	0.00	0.00
59.219	17.090	0.556	7181.3	4422.0	6.106	4.116	3.25		Clay	60.0			16.15	0.82	n.a.	n.a.	0.71	0.426	n.a.	n.a.	n.a.	n.a.	0.00	0.00
59.383	17.480	0.521	7201.0	4431.5	6.264	3.757	3.22		Clay	58.5			16.52	0.82	n.a.	n.a.	0.71	0.426	n.a.	n.a.	n.a.	n.a.	0.00	0.00
59.547	17.430	0.508	7220.7	4440.9	6.224	3.674	3.22		Clay	58.4			16.47	0.82	n.a.	n.a.	0.71	0.425	n.a.	n.a.	n.a.	n.a.	0.00	0.00
59.711	17.110	0.498	7240.4	4450.4	6.062	3.688	3.23		Clay	58.9			16.17	0.82	n.a.	n.a.	0.70	0.425	n.a.	n.a.	n.a.	n.a.	0.00	0.00
59.875	17.560	0.430	7260.0	4459.8	6.247	3.083	3.17		Clay	56.4			16.60	0.82	n.a.	n.a.	0.70	0.425	n.a.	n.a.	n.a.	n.a.	0.00	0.00
60.039	15.920	0.378	7279.7	4469.3	5.495	3.078	3.22		Clay	58.6			15.05	0.82	n.a.	n.a.	0.70	0.424	n.a.	n.a.	n.a.	n.a.	0.00	0.00
60.203	15.210	0.424	7299.4	4478.7	5.162	3.665	3.28		Clay	61.6			14.38	0.82	n.a.	n.a.	0.70	0.424	n.a.	n.a.	n.a.	n.a.	0.00	0.00
60.367	17.800	0.499	7319.1	4488.2	6.301	3.530	3.20		Clay	57.7			16.82	0.82	n.a.	n.a.	0.70	0.424	n.a.	n.a.	n.a.	n.a.	0.00	0.00
60.531	20.180	0.538	7338.8	4497.6	7.342	3.256	3.13		Clay	54.3			19.07	0.82	n.a.	n.a.	0.70	0.423	n.a.	n.a.	n.a.	n.a.	0.00	0.00
60.696	21.140	0.535	7358.5	4507.1	7.748	3.063	3.09		Clay	52.8			19.98	0.82	n.a.	n.a.	0.70	0.423	n.a.	n.a.	n.a.	n.a.	0.00	0.00
60.860	20.140	0.426	7378.1	4516.5	7.285	2.590	3.08		Clay	52.0			19.04	0.82	n.a.	n.a.	0.70	0.422	n.a.	n.a.	n.a.	n.a.	0.00	0.00
61.024	18.020	0.472	7397.8	4526.0	6.328	3.295	3.18		Clay	56.9			17.03	0.82	n.a.	n.a.	0.70	0.422	n.a.	n.a.	n.a.	n.a.	0.00	0.00
61.188	16.920	0.431	7417.5	4535.4	5.826	3.261	3.21		Clay	58.2			15.99	0.82	n.a.	n.a.	0.70	0.422	n.a.	n.a.	n.a.	n.a.	0.00	0.00
61.352	17.470	0.412	7437.2	4544.9	6.051	2.992	3.18		Clay	56.6			16.51	0.82	n.a.	n.a.	0.70	0.421	n.a.	n.a.	n.a.	n.a.	0.00	0.00
61.516	16.410	0.394	7456.9	4554.3	5.569	3.106	3.22		Clay	58.4			15.51	0.82	n.a.	n.a.	0.70	0.421	n.a.	n.a.	n.a.	n.a.	0.00	0.00
61.680	15.850	0.393	7476.6	4563.8	5.308	3.241	3.25		Clay	59.8														

Depth (ft)	q <sub>c</sub> (tsf)	f <sub>s</sub> (tsf)	σ <sub>vc</sub> (psf)	In situ σ'vc (psf)	Q	F (%)	lc	Layer "Plastic" PI > 7	Flag Soil Type	Fines (%)	q <sub>cN</sub> near interfaces (soft layer)	Thin Layer Factor (K <sub>tl</sub> )	Interpreted q <sub>cN</sub>	C <sub>N</sub>	q <sub>c1N</sub>	q <sub>c1N-CS</sub>	Stress Reduction Coeff, r <sub>d</sub>	CSR	K <sub>σ</sub> for Sand	CRRM=7.5, σ'vc = 1 atm	CRR	Factor of Safety (CRR/CSR)	Vertical Strain ε <sub>v</sub>	Settlement (Inches)
63.156	19.850	0.725	7653.7	4648.8	6.893	4.525	3.23		Clay	59.1			18.76	0.81	n.a.	n.a.	0.69	0.417	n.a.	n.a.	n.a.	n.a.	0.00	0.00
63.320	20.380	0.778	7673.4	4658.2	7.103	4.700	3.23		Clay	59.1			19.26	0.81	n.a.	n.a.	0.69	0.417	n.a.	n.a.	n.a.	n.a.	0.00	0.00
63.484	20.620	0.805	7693.1	4667.7	7.187	4.797	3.23		Clay	59.1			19.49	0.81	n.a.	n.a.	0.69	0.416	n.a.	n.a.	n.a.	n.a.	0.00	0.00
63.648	20.280	0.795	7712.8	4677.1	7.023	4.839	3.24		Clay	59.6			19.17	0.81	n.a.	n.a.	0.68	0.416	n.a.	n.a.	n.a.	n.a.	0.00	0.00
63.812	19.640	0.769	7732.5	4686.6	6.731	4.876	3.26		Clay	60.4			18.56	0.81	n.a.	n.a.	0.68	0.415	n.a.	n.a.	n.a.	n.a.	0.00	0.00
63.976	19.380	0.761	7752.2	4696.0	6.603	4.911	3.27		Clay	60.8			18.32	0.81	n.a.	n.a.	0.68	0.415	n.a.	n.a.	n.a.	n.a.	0.00	0.00
64.140	18.450	0.718	7771.9	4705.5	6.190	4.933	3.29		Clay	62.0			17.44	0.81	n.a.	n.a.	0.68	0.415	n.a.	n.a.	n.a.	n.a.	0.00	0.00
64.304	18.560	0.686	7791.5	4714.9	6.220	4.675	3.28		Clay	61.2			17.54	0.81	n.a.	n.a.	0.68	0.414	n.a.	n.a.	n.a.	n.a.	0.00	0.00
64.469	19.920	0.703	7811.2	4724.4	6.779	4.387	3.23		Clay	59.0			18.83	0.81	n.a.	n.a.	0.68	0.414	n.a.	n.a.	n.a.	n.a.	0.00	0.00
64.633	21.250	0.746	7830.9	4733.8	7.324	4.302	3.20		Clay	57.5			20.09	0.81	n.a.	n.a.	0.68	0.414	n.a.	n.a.	n.a.	n.a.	0.00	0.00
64.797	21.520	0.741	7850.6	4743.3	7.419	4.211	3.19		Clay	57.0			20.34	0.81	n.a.	n.a.	0.68	0.413	n.a.	n.a.	n.a.	n.a.	0.00	0.00
64.961	20.660	0.735	7870.3	4752.7	7.038	4.395	3.22		Clay	58.4			19.53	0.81	n.a.	n.a.	0.68	0.413	n.a.	n.a.	n.a.	n.a.	0.00	0.00
65.125	20.300	0.707	7890.0	4762.2	6.869	4.323	3.22		Clay	58.6			19.19	0.81	n.a.	n.a.	0.68	0.412	n.a.	n.a.	n.a.	n.a.	0.00	0.00
65.289	20.520	0.680	7909.6	4771.6	6.943	4.103	3.20		Clay	57.8			19.40	0.81	n.a.	n.a.	0.68	0.412	n.a.	n.a.	n.a.	n.a.	0.00	0.00
65.453	20.600	0.701	7929.3	4781.1	6.959	4.214	3.21		Clay	58.1			19.47	0.81	n.a.	n.a.	0.68	0.412	n.a.	n.a.	n.a.	n.a.	0.00	0.00
65.617	22.220	0.778	7949.0	4790.5	7.617	4.265	3.18		Clay	56.7			21.00	0.81	n.a.	n.a.	0.68	0.411	n.a.	n.a.	n.a.	n.a.	0.00	0.00
65.781	23.560	0.914	7968.7	4800.0	8.157	4.668	3.18		Clay	56.7			22.27	0.81	n.a.	n.a.	0.67	0.411	n.a.	n.a.	n.a.	n.a.	0.00	0.00
65.945	27.050	1.183	7988.4	4809.4	9.588	5.130	3.15		Clay	55.3			25.57	0.81	n.a.	n.a.	0.67	0.411	n.a.	n.a.	n.a.	n.a.	0.00	0.00
66.109	31.680	1.329	8008.1	4818.9	11.486	4.802	3.07		Clay	51.7			29.94	0.80	n.a.	n.a.	0.67	0.410	n.a.	n.a.	n.a.	n.a.	0.00	0.00
66.273	33.980	1.292	8027.8	4828.3	12.413	4.310	3.01		Clay	49.3			32.12	0.80	n.a.	n.a.	0.67	0.410	n.a.	n.a.	n.a.	n.a.	0.00	0.00
66.437	31.740	1.152	8047.4	4837.8	11.458	4.157	3.03		Clay	50.1			30.00	0.80	n.a.	n.a.	0.67	0.409	n.a.	n.a.	n.a.	n.a.	0.00	0.00
66.601	30.880	1.894	8067.1	4847.2	11.077	7.056	3.19		Clay	57.0			29.19	0.80	n.a.	n.a.	0.67	0.409	n.a.	n.a.	n.a.	n.a.	0.00	0.00
66.765	52.670	2.067	8086.8	4856.7	20.025	4.252	2.85		Clay	42.6			49.78	0.80	n.a.	n.a.	0.67	0.409	n.a.	n.a.	n.a.	n.a.	0.00	0.00
66.929	118.370	2.110	8106.5	4866.1	71.251	1.846	2.20		Sand	21.7	184.6		184.60	0.77	141.69	209.03	0.67	0.408	0.756	1.796	1.591	3.90	0.00	0.00
67.093	157.040	2.158	8126.2	4875.6	95.254	1.411	2.02		Sand	17.5	184.6		184.60	0.76	139.55	195.75	0.67	0.408	0.791	0.944	0.875	2.14	0.00	0.00
67.257	183.410	2.358	8145.9	4885.0	111.560	1.315	1.95		Sand	16.0	184.6		184.60	0.75	138.28	188.36	0.67	0.408	0.807	0.707	0.668	1.64	0.00	0.00
67.421	195.310	1.633	8165.6	4894.5	118.842	0.854	1.81		Sand	13.1	184.6		184.60	0.73	135.21	170.36	0.67	0.407	0.839	0.411	0.404	0.99	0.01	0.00
67.585	193.370	1.929	8185.2	4903.9	117.517	1.019	1.86		Sand	14.1			182.77	0.74	134.59	175.25	0.67	0.407	0.830	0.467	0.454	1.12	0.01	0.00
67.749	185.650	1.984	8204.9	4913.4	112.609	1.093	1.90		Sand	14.8			175.47	0.73	128.49	171.29	0.66	0.406	0.836	0.421	0.412	1.01	0.01	0.00
67.913	186.190	1.841	8224.6	4922.8	112.829	1.011	1.87		Sand	14.3			175.98	0.73	128.40	169.01	0.66	0.406	0.840	0.398	0.391	0.96	0.01	0.00
68.077	192.880	1.616	8244.3	4932.3	116.857	0.856	1.82		Sand	13.2			182.31	0.73	132.79	168.24	0.66	0.406	0.840	0.390	0.384	0.95	0.01	0.00
68.241	185.780	1.565	8264.0	4941.7	112.348	0.862	1.83		Sand	13.5			175.60	0.72	126.94	162.98	0.66	0.405	0.848	0.347	0.344	0.85	0.01	0.00
68.406	179.410	1.623	8283.7	4951.2	108.298	0.926	1.86		Sand	14.1			169.57	0.72	122.09	160.46	0.66	0.405	0.851	0.329	0.328	0.81	0.01	0.00
68.570	169.670	1.824	8303.3	4960.6	102.176	1.102	1.93		Sand	15.5			160.37	0.72	115.00	158.03	0.66	0.405	0.854	0.314	0.314	0.78	0.01	0.00
68.734	204.190	1.771	8323.0	4970.1	123.363	0.885	1.81		Sand	13.0			193.00	0.74	141.88	177.83	0.66	0.404	0.823	0.502	0.484	1.20	0.01	0.00
68.898	267.200	1.518	8342.7	4979.5	162.062	0.577	1.60		Sand	9.5			252.55	0.76	192.23	208.09	0.66	0.404	0.752	1.706	1.503	3.72	0.00	0.00
69.062	276.890	2.072	8362.4	4989.0	167.867	0.760	1.66		Sand	10.5			261.71	0.78	203.45	228.32	0.66	0.403	0.743	2.000	1.740	4.31	0.00	0.00
69.226	288.310	2.583	8382.1	4998.4	174.726	0.909	1.70		Sand	11.2			272.50	0.79	215.90	247.74	0.66	0.403	0.742	2.000	1.739	4.31	0.00	0.00
69.390	276.120	2.982	8401.8	5007.9	167.065	1.097	1.77		Sand	12.4			260.98	0.79	206.72	248.02	0.66	0.403	0.742	2.000	1.737	4.31	0.00	0.00
69.554	278.360	3.192	8421.5	5017.3	168.277	1.164	1.79		Sand	12.7			263.10	0.80	209.40	253.48	0.66	0.402	0.741	2.000	1.736	4.31	0.00	0.00
69.718	286.450	3.269	8441.1	5026.7	173.074	1.158	1.78		Sand	12.5			270.75	0.80	215.49	258.97	0.66	0.402	0.740	2.000	1.735	4.32	0.00	0.00
69.882	332.570	3.133	8460.8	5036.2	201.161	0.954	1.67		Sand	10.7			314.34	0.80	250.06	280.78	0.66	0.402	0.740	2.000	1.733	4.32	0.00	0.00
70.046	361.830	2.748	8480.5	5045.6	218.876	0.768	1.58		Sand	9.2			341.99	0.80	271.93	289.93	0.65	0.401	0.739	2.000	1.732	4.32	0.00	0.00
70.210	363.350	2.878	8500.2	5055.1	219.595	0.801	1.59		Sand	9.4			343.43	0.79	272.93	292.69	0.65	0.401	0.739	2.000	1.731	4.32	0.00	0.00
70.374	333.300	3.614	8519.9	5064.5	201.025	1.098	1.72		Sand	11.4			315.03	0.79	250.24	288.38	0.65	0.401	0.738	2.000	1.729	4.32	0.00	0.00
70.538	327.610	5.053	8539.6	5074.0	197.359	1.563	1.84		Sand	13.6			309.65	0.79	245.85	303.25	0.65	0.400	0.738	2.000	1.728	4.32	0.00	0.00
70.702	320.580	5.799	8559.3	5083.4	192.883	1.833	1.90		Sand	14.8			303.01	0.79	240.45	305.85	0.65	0.400	0.737	2.000	1.727	4.32	0.00	0.00
70.866	374.730	4.025	8579.9	5092.9	225.688	1.087	1.68		Sand	10.8			354.19	0.79	280.93	315.78	0.65	0.399	0.737	2.000	1.725	4.32	0.00	0.00
71.030	450.720	6.153	8598.6	5102.3	271.726	1.378	1.71		Sand	11.3			426.01	0.79	337.73	383.93	0.65	0.399	0.736	2.000	1.724	4.32	0.00	0.00
71.194	408.670	8.863	8618.3	5111.8	245.898	2.192	1.90		Sand	14.8			386.27	0.79	306.07	384.48	0.65	0.399	0.735	2.000	1.723	4.32	0.00	0.00
71.358	339.700	7.703	8638.0	5121.2	203.762	2.297	1.96		Sand	16.1			321.08	0.79	254.30	331.31	0.65	0.398	0.735	2.000	1.722	4.32	0.00	0.00
71.522	319.140	5.397	8657.7	5130.7	191.089	1.714	1.88		Sand	14.4			301.64	0.79	238.79	300.96	0.65	0.398	0.734	2.000	1.720	4.32	0.00	0.00
71.686	284.380	3.873	8677.4	5140.1	169.827	1.383	1.84		Sand	13.7			268.79	0.79	212.68</									

Depth (ft)	q <sub>c</sub> (tsf)	f <sub>s</sub> (tsf)	σ <sub>vc</sub> (psf)	In situ σ'vc (psf)	Q	F (%)	lc	Layer "Plastic" PI > 7	Flag Soil Type	Fines (%)	q <sub>c</sub> -N near interfaces (soft layer)	Thin Layer Factor (K <sub>tl</sub> )	Interpreted q <sub>c</sub> -N	C <sub>N</sub>	q <sub>c</sub> -1N	q <sub>c</sub> -1N-CS	Stress Reduction Coeff. r <sub>d</sub>	CSR	K <sub>σ</sub> for Sand	CRR <sub>M=7.5</sub> σ'vc = 1 atm	CRR	Factor of Safety (CRR/CSR)	Vertical Strain ε <sub>v</sub>	Settlement (Inches)
0.164	10.550	0.332	20.5	20.5	101.198	3.145	2.26		Unsaturated	23.3			9.97	1.70	16.95	48.68	1.00	0.325	1.100	n.a.	n.a.	n.a.	0.00	0.00
0.328	17.330	0.777	41.0	41.0	117.519	4.491	2.34		Unsaturated	25.5			16.38	1.70	27.85	64.33	1.00	0.325	1.100	n.a.	n.a.	n.a.	0.00	0.00
0.492	41.730	1.219	61.5	61.5	231.157	2.924	2.02		Unsaturated	17.3			39.44	1.70	67.05	104.80	1.00	0.325	1.100	n.a.	n.a.	n.a.	0.00	0.00
0.656	48.740	1.837	82.0	82.0	233.792	3.772	2.11		Unsaturated	19.4			46.07	1.70	78.32	123.42	1.00	0.325	1.100	n.a.	n.a.	n.a.	0.00	0.00
0.820	56.610	2.156	102.5	102.5	242.859	3.811	2.10		Unsaturated	19.3			53.51	1.70	90.96	139.30	1.00	0.325	1.100	n.a.	n.a.	n.a.	0.00	0.00
0.984	57.320	2.541	123.0	123.0	224.442	4.437	2.18		Unsaturated	21.2			54.18	1.70	92.10	144.04	1.00	0.325	1.100	n.a.	n.a.	n.a.	0.00	0.00
1.148	53.010	2.699	143.5	143.5	192.114	5.099	2.26		Unsaturated	23.4			50.10	1.70	85.18	138.02	1.00	0.325	1.100	n.a.	n.a.	n.a.	0.00	0.00
1.312	48.510	2.927	164.0	164.0	164.396	6.045	2.36		Unsaturated	26.2			45.85	1.70	77.95	130.94	1.00	0.325	1.100	n.a.	n.a.	n.a.	0.00	0.00
1.476	44.990	3.018	184.5	184.5	143.695	6.722	2.43		Unsaturated	28.2			42.52	1.70	72.29	124.68	1.00	0.325	1.100	n.a.	n.a.	n.a.	0.00	0.00
1.640	36.790	2.861	205.1	205.1	111.393	7.797	2.55		Unsaturated	31.8			34.77	1.70	59.11	108.47	1.00	0.325	1.100	n.a.	n.a.	n.a.	0.00	0.00
1.804	32.690	2.540	225.6	225.6	94.310	7.797	2.59		Unsaturated	33.2			30.90	1.70	52.53	99.98	1.00	0.325	1.100	n.a.	n.a.	n.a.	0.00	0.00
1.969	31.610	2.348	246.1	246.1	87.273	7.456	2.59		Unsaturated	33.3			29.88	1.70	50.79	97.68	1.00	0.325	1.100	n.a.	n.a.	n.a.	0.00	0.00
2.133	33.980	2.232	266.6	266.6	90.133	6.595	2.54		Unsaturated	31.6			32.12	1.70	54.60	102.37	1.00	0.325	1.100	n.a.	n.a.	n.a.	0.00	0.00
2.297	36.420	2.325	287.1	287.1	93.089	6.409	2.52		Unsaturated	31.0			34.42	1.70	58.52	107.44	1.00	0.325	1.100	n.a.	n.a.	n.a.	0.00	0.00
2.461	37.340	2.434	307.6	307.6	92.188	6.545	2.53		Unsaturated	31.3			35.29	1.70	60.00	109.52	1.00	0.325	1.100	n.a.	n.a.	n.a.	0.00	0.00
2.625	37.570	2.518	328.1	328.1	89.788	6.731	2.55		Unsaturated	31.9			35.51	1.70	60.37	110.17	1.00	0.325	1.100	n.a.	n.a.	n.a.	0.00	0.00
2.789	37.670	2.579	348.6	348.6	87.317	6.877	2.56		Unsaturated	32.4			35.60	1.70	60.53	110.52	1.00	0.325	1.100	n.a.	n.a.	n.a.	0.00	0.00
2.953	38.950	2.480	369.1	369.1	87.730	6.397	2.54		Unsaturated	31.5			36.81	1.70	62.59	113.03	1.00	0.324	1.100	n.a.	n.a.	n.a.	0.00	0.00
3.117	36.640	2.412	389.6	389.6	80.279	6.619	2.57		Unsaturated	32.6			34.63	1.70	58.87	108.37	1.00	0.324	1.100	n.a.	n.a.	n.a.	0.00	0.00
3.281	36.800	2.242	410.1	410.1	78.568	6.125	2.55		Unsaturated	32.0			34.78	1.70	59.13	108.54	1.00	0.324	1.100	n.a.	n.a.	n.a.	0.00	0.00
3.445	38.850	2.052	430.6	430.6	80.948	5.312	2.49		Unsaturated	30.2			36.72	1.70	62.42	112.37	1.00	0.324	1.100	n.a.	n.a.	n.a.	0.00	0.00
3.609	34.560	1.766	451.1	451.1	70.284	5.143	2.52		Unsaturated	31.0			32.67	1.70	55.53	103.45	1.00	0.324	1.100	n.a.	n.a.	n.a.	0.00	0.00
3.773	33.090	1.379	471.6	471.6	65.776	4.197	2.47		Unsaturated	29.5			31.28	1.70	53.17	99.79	1.00	0.324	1.100	n.a.	n.a.	n.a.	0.00	0.00
3.937	36.900	1.102	492.1	492.1	71.838	3.006	2.34		Unsaturated	25.6			34.88	1.70	59.29	105.90	0.99	0.323	1.100	n.a.	n.a.	n.a.	0.00	0.00
4.101	41.730	1.035	512.6	512.6	79.642	2.496	2.25		Unsaturated	23.1			39.44	1.70	67.05	114.04	0.99	0.323	1.100	n.a.	n.a.	n.a.	0.00	0.00
4.265	46.190	1.307	533.1	533.1	86.474	2.847	2.27		Unsaturated	23.6			43.66	1.70	74.22	123.87	0.99	0.323	1.100	n.a.	n.a.	n.a.	0.00	0.00
4.429	43.850	1.765	553.6	553.6	80.515	4.050	2.41		Unsaturated	27.4			41.45	1.70	70.46	121.82	0.99	0.323	1.100	n.a.	n.a.	n.a.	0.00	0.00
4.593	34.460	2.033	574.1	574.1	80.490	5.950	2.53		Unsaturated	31.4			32.57	1.70	55.37	103.35	0.99	0.323	1.100	n.a.	n.a.	n.a.	0.00	0.00
4.757	27.270	1.966	594.7	594.7	61.989	7.289	2.67		Unsaturated	36.1			25.78	1.70	43.82	88.80	0.99	0.322	1.100	n.a.	n.a.	n.a.	0.00	0.00
4.921	23.720	1.730	615.2	615.2	76.118	7.391	2.62		Unsaturated	34.4			22.42	1.70	38.11	80.87	0.99	0.322	1.100	n.a.	n.a.	n.a.	0.00	0.00
5.085	24.280	1.521	635.7	635.7	52.558	6.349	2.67		Unsaturated	36.1			22.95	1.70	39.01	82.34	0.99	0.322	1.100	n.a.	n.a.	n.a.	0.00	0.00
5.249	21.680	1.210	656.2	656.2	45.804	5.667	2.68		Unsaturated	36.2			20.49	1.70	34.84	76.73	0.99	0.322	1.100	n.a.	n.a.	n.a.	0.00	0.00
5.413	27.720	0.951	676.7	676.7	45.766	3.472	2.52		Unsaturated	31.1			26.20	1.70	44.54	88.77	0.99	0.322	1.100	n.a.	n.a.	n.a.	0.00	0.00
5.577	36.170	1.234	697.2	697.2	58.985	3.445	2.44		Unsaturated	28.6			34.19	1.70	58.12	106.00	0.99	0.321	1.100	n.a.	n.a.	n.a.	0.00	0.00
5.741	28.820	1.423	717.7	717.7	57.342	4.998	2.57		Unsaturated	32.6			27.24	1.70	46.31	91.52	0.99	0.321	1.100	n.a.	n.a.	n.a.	0.00	0.00
5.906	21.700	1.338	738.2	738.2	57.793	6.273	2.64		Unsaturated	35.1			20.51	1.70	34.87	76.61	0.99	0.321	1.093	n.a.	n.a.	n.a.	0.00	0.00
6.070	19.650	1.124	758.7	758.7	50.800	5.830	2.66		Unsaturated	35.5			18.57	1.70	31.57	72.25	0.99	0.321	1.088	n.a.	n.a.	n.a.	0.00	0.00
6.234	18.390	1.049	779.2	779.2	46.202	5.829	2.68		Unsaturated	36.5			17.38	1.70	29.55	69.64	0.99	0.321	1.084	n.a.	n.a.	n.a.	0.00	0.00
6.398	17.840	1.074	799.7	799.7	43.616	6.159	2.72		Unsaturated	37.7			16.86	1.70	28.67	68.58	0.99	0.321	1.081	n.a.	n.a.	n.a.	0.00	0.00
6.562	16.090	1.070	820.2	820.2	38.234	6.821	2.79		Clay	40.3			15.21	1.28	n.a.	n.a.	0.99	0.322	n.a.	n.a.	n.a.	n.a.	0.00	0.00
6.726	16.100	1.041	840.7	840.7	37.301	6.642	2.79		Clay	40.3			15.22	1.28	n.a.	n.a.	0.99	0.326	n.a.	n.a.	n.a.	n.a.	0.00	0.00
6.890	16.030	1.021	861.2	861.2	36.226	6.543	2.79		Clay	40.4			15.15	1.27	n.a.	n.a.	0.98	0.329	n.a.	n.a.	n.a.	n.a.	0.00	0.00
7.054	16.300	1.048	881.7	881.7	35.973	6.606	2.80		Clay	40.6			15.41	1.26	n.a.	n.a.	0.98	0.333	n.a.	n.a.	n.a.	n.a.	0.00	0.00
7.218	16.090	1.070	902.2	902.2	34.667	6.844	2.82		Clay	41.5			15.21	1.25	n.a.	n.a.	0.98	0.336	n.a.	n.a.	n.a.	n.a.	0.00	0.00
7.382	15.410	1.060	922.7	922.7	32.401	7.094	2.85		Clay	42.7			14.57	1.24	n.a.	n.a.	0.98	0.340	n.a.	n.a.	n.a.	n.a.	0.00	0.00
7.546	14.930	1.048	943.2	943.2	30.657	7.250	2.87		Clay	43.6			14.11	1.24	n.a.	n.a.	0.98	0.343	n.a.	n.a.	n.a.	n.a.	0.00	0.00
7.710	15.570	1.007	963.7	963.7	31.311	6.673	2.84		Clay	42.3			14.72	1.23	n.a.	n.a.	0.98	0.346	n.a.	n.a.	n.a.	n.a.	0.00	0.00
7.874	15.690	1.021	984.3	984.3	30.882	6.715	2.85		Clay	42.6			14.83	1.22	n.a.	n.a.	0.98	0.349	n.a.	n.a.	n.a.	n.a.	0.00	0.00
8.038	15.880	1.026	1004.8	1004.8	30.610	6.670	2.85		Clay	42.6			15.01	1.22	n.a.	n.a.	0.98	0.352	n.a.	n.a.	n.a.	n.a.	0.00	0.00
8.202	15.840	1.060	1025.3	1025.3	29.899	6.918	2.87		Clay	43.3			14.97	1.21	n.a.	n.a.	0.98	0.355	n.a.	n.a.	n.a.	n.a.	0.00	0.00
8.366	16.590	1.068	1045.8	1045.8	30.728	6.649	2.85		Clay	42.5			15.68	1.20	n.a.	n.a.	0.98	0.358	n.a.	n.a.	n.a.	n.a.	0.00	0.00
8.530	15.660	0.992	1066.3	1066.3	28.373	6.557	2.87		Clay	43.3			14.80	1.20	n.a.	n.a.	0.98	0.361	n.a.	n.a.	n.a.	n.a.	0.00	0.00
8.694	14.870	1.016	1086.8	1086.8	26.365	7.090	2.91		Clay	45.1			14.05	1.19	n.a.	n.a.	0.98	0.364	n.a.	n.a.	n.a.	n.a.	0.00	0.00
8.858	15.680	1.084	1107.3	1107.3	27.322	7.163	2.91		Clay	44.8			14.82	1.19	n.a.	n.a.	0.98	0.367	n.a.	n.a.	n.a.	n.a.	0.00	0.00
9.022	16.100	1.074	1127.8	1127.8	27.551	6.915	2.89		Clay	44.3			15.22	1.18	n.a.	n.a.	0.98	0.369						

Depth (ft)	q <sub>c</sub> (tsf)	f <sub>s</sub> (tsf)	σ <sub>vc</sub> (psf)	In situ σ'vc (psf)	Q	F (%)	lc	Layer "Plastic" PI > 7	Flag Soil Type	Fines (%)	q <sub>c-N</sub> near interfaces (soft layer)	Thin Layer Factor (K <sub>tl</sub> )	Interpreted q <sub>c-N</sub>	C <sub>N</sub>	q <sub>c1-N</sub>	q <sub>c1-N-CS</sub>	Stress Reduction Coeff. r <sub>d</sub>	CSR	K <sub>σ</sub> for Sand	CRR <sub>M=7.5</sub> σ'vc = 1 atm	CRR	Factor of Safety (CRR/CSR)	Vertical Strain ε <sub>v</sub>	Settlement (Inches)
10.663	21.390	0.666	1332.8	1332.8	31.097	3.214	2.63		Clay	34.4			20.22	1.13	n.a.	n.a.	0.97	0.393	n.a.	n.a.	n.a.	n.a.	0.00	0.00
10.827	13.730	0.648	1353.3	1353.3	19.290	4.965	2.91		Clay	44.8			12.98	1.13	n.a.	n.a.	0.97	0.395	n.a.	n.a.	n.a.	n.a.	0.00	0.00
10.991	11.950	0.751	1373.9	1373.9	16.396	6.665	3.04		Clay	50.6			11.29	1.12	n.a.	n.a.	0.97	0.397	n.a.	n.a.	n.a.	n.a.	0.00	0.00
11.155	12.130	0.877	1394.4	1394.4	16.399	7.674	3.08		Clay	52.4			11.47	1.12	n.a.	n.a.	0.97	0.399	n.a.	n.a.	n.a.	n.a.	0.00	0.00
11.319	11.800	0.893	1414.9	1414.9	15.680	8.049	3.11		Clay	53.6			11.15	1.11	n.a.	n.a.	0.97	0.401	n.a.	n.a.	n.a.	n.a.	0.00	0.00
11.483	11.380	0.846	1435.4	1435.4	14.857	7.933	3.13		Clay	54.2			10.76	1.11	n.a.	n.a.	0.97	0.403	n.a.	n.a.	n.a.	n.a.	0.00	0.00
11.647	12.770	0.874	1455.9	1455.9	16.543	7.255	3.07		Clay	51.5			12.07	1.10	n.a.	n.a.	0.97	0.405	n.a.	n.a.	n.a.	n.a.	0.00	0.00
11.811	13.450	0.947	1476.4	1476.4	17.220	7.450	3.06		Clay	51.3			12.71	1.10	n.a.	n.a.	0.96	0.406	n.a.	n.a.	n.a.	n.a.	0.00	0.00
11.975	12.450	0.870	1496.9	1496.9	15.635	7.437	3.09		Clay	52.6			11.77	1.10	n.a.	n.a.	0.96	0.408	n.a.	n.a.	n.a.	n.a.	0.00	0.00
12.139	12.360	0.831	1517.4	1517.4	15.291	7.160	3.09		Clay	52.5			11.68	1.09	n.a.	n.a.	0.96	0.410	n.a.	n.a.	n.a.	n.a.	0.00	0.00
12.303	12.240	0.800	1537.9	1537.9	14.918	6.974	3.09		Clay	52.5			11.57	1.09	n.a.	n.a.	0.96	0.412	n.a.	n.a.	n.a.	n.a.	0.00	0.00
12.467	12.430	0.839	1558.4	1558.4	14.952	7.202	3.10		Clay	52.9			11.75	1.08	n.a.	n.a.	0.96	0.413	n.a.	n.a.	n.a.	n.a.	0.00	0.00
12.631	13.400	0.895	1578.9	1578.9	15.974	7.099	3.07		Clay	51.7			12.67	1.08	n.a.	n.a.	0.96	0.415	n.a.	n.a.	n.a.	n.a.	0.00	0.00
12.795	13.670	0.902	1599.4	1599.4	16.094	7.011	3.06		Clay	51.5			12.92	1.08	n.a.	n.a.	0.96	0.416	n.a.	n.a.	n.a.	n.a.	0.00	0.00
12.959	13.490	0.877	1619.9	1619.9	15.655	6.918	3.07		Clay	51.7			12.75	1.07	n.a.	n.a.	0.96	0.418	n.a.	n.a.	n.a.	n.a.	0.00	0.00
13.123	13.110	0.814	1640.4	1640.4	14.984	6.621	3.07		Clay	51.8			12.39	1.07	n.a.	n.a.	0.96	0.419	n.a.	n.a.	n.a.	n.a.	0.00	0.00
13.287	13.090	0.795	1660.9	1660.9	14.762	6.484	3.07		Clay	51.7			12.37	1.07	n.a.	n.a.	0.96	0.421	n.a.	n.a.	n.a.	n.a.	0.00	0.00
13.451	12.720	0.787	1681.4	1681.4	14.130	6.628	3.09		Clay	52.6			12.02	1.06	n.a.	n.a.	0.96	0.422	n.a.	n.a.	n.a.	n.a.	0.00	0.00
13.615	12.580	0.745	1701.9	1701.9	13.783	6.349	3.09		Clay	52.4			11.89	1.06	n.a.	n.a.	0.96	0.424	n.a.	n.a.	n.a.	n.a.	0.00	0.00
13.780	14.590	0.744	1722.4	1722.4	15.941	5.419	2.99		Clay	48.4			13.79	1.06	n.a.	n.a.	0.96	0.425	n.a.	n.a.	n.a.	n.a.	0.00	0.00
13.944	18.720	0.779	1742.9	1742.9	20.481	4.363	2.85		Clay	42.6			17.69	1.05	n.a.	n.a.	0.96	0.427	n.a.	n.a.	n.a.	n.a.	0.00	0.00
14.108	19.990	0.779	1763.5	1763.5	21.671	4.074	2.81		Clay	41.1			18.89	1.05	n.a.	n.a.	0.95	0.428	n.a.	n.a.	n.a.	n.a.	0.00	0.00
14.272	16.860	0.774	1784.0	1784.0	17.902	4.847	2.92		Clay	45.5			15.94	1.05	n.a.	n.a.	0.95	0.429	n.a.	n.a.	n.a.	n.a.	0.00	0.00
14.436	12.690	0.628	1804.5	1804.5	13.065	5.325	3.05		Clay	51.0			11.99	1.04	n.a.	n.a.	0.95	0.430	n.a.	n.a.	n.a.	n.a.	0.00	0.00
14.600	10.160	0.491	1825.0	1825.0	10.134	5.308	3.14		Clay	54.8			9.60	1.04	n.a.	n.a.	0.95	0.432	n.a.	n.a.	n.a.	n.a.	0.00	0.00
14.764	10.840	0.416	1845.5	1845.5	10.748	4.191	3.06		Clay	51.1			10.25	1.04	n.a.	n.a.	0.95	0.433	n.a.	n.a.	n.a.	n.a.	0.00	0.00
14.928	11.370	0.370	1866.0	1866.0	11.187	3.542	3.00		Clay	48.7			10.75	1.03	n.a.	n.a.	0.95	0.434	n.a.	n.a.	n.a.	n.a.	0.00	0.00
15.092	11.020	0.353	1886.0	1880.3	10.719	3.503	3.01		Clay	49.2			10.42	1.03	n.a.	n.a.	0.95	0.435	n.a.	n.a.	n.a.	n.a.	0.00	0.00
15.256	10.770	0.434	1905.7	1889.7	10.390	4.424	3.08		Clay	52.3			10.18	1.03	n.a.	n.a.	0.95	0.436	n.a.	n.a.	n.a.	n.a.	0.00	0.00
15.420	12.730	0.603	1925.4	1899.2	12.392	5.123	3.06		Clay	51.4			12.03	1.03	n.a.	n.a.	0.95	0.438	n.a.	n.a.	n.a.	n.a.	0.00	0.00
15.584	16.100	0.848	1945.1	1908.6	15.852	5.606	3.00		Clay	48.9			15.22	1.03	n.a.	n.a.	0.95	0.439	n.a.	n.a.	n.a.	n.a.	0.00	0.00
15.748	21.150	1.080	1964.8	1918.1	21.029	5.355	2.90		Clay	44.6			19.99	1.03	n.a.	n.a.	0.95	0.440	n.a.	n.a.	n.a.	n.a.	0.00	0.00
15.912	25.890	1.316	1984.4	1927.5	25.834	5.287	2.83		Clay	41.9			24.47	1.02	n.a.	n.a.	0.95	0.441	n.a.	n.a.	n.a.	n.a.	0.00	0.00
16.076	26.710	1.341	2004.1	1937.0	26.544	5.217	2.82		Clay	41.4			25.25	1.02	n.a.	n.a.	0.95	0.442	n.a.	n.a.	n.a.	n.a.	0.00	0.00
16.240	24.480	1.268	2023.8	1946.4	24.114	5.403	2.86		Clay	43.0			23.14	1.02	n.a.	n.a.	0.94	0.443	n.a.	n.a.	n.a.	n.a.	0.00	0.00
16.404	21.490	1.195	2043.5	1955.9	20.930	5.840	2.93		Clay	45.7			20.31	1.02	n.a.	n.a.	0.94	0.444	n.a.	n.a.	n.a.	n.a.	0.00	0.00
16.568	21.700	1.272	2063.2	1965.3	21.033	6.156	2.94		Clay	46.2			20.51	1.02	n.a.	n.a.	0.94	0.445	n.a.	n.a.	n.a.	n.a.	0.00	0.00
16.732	24.260	1.236	2082.9	1974.8	23.515	5.324	2.86		Clay	43.1			22.93	1.02	n.a.	n.a.	0.94	0.446	n.a.	n.a.	n.a.	n.a.	0.00	0.00
16.896	29.320	1.308	2102.6	1984.2	28.493	4.628	2.76		Clay	39.2			27.71	1.02	n.a.	n.a.	0.94	0.447	n.a.	n.a.	n.a.	n.a.	0.00	0.00
17.060	37.760	1.634	2122.2	1993.7	36.815	4.453	2.67		Clay	35.9			35.69	1.02	n.a.	n.a.	0.94	0.447	n.a.	n.a.	n.a.	n.a.	0.00	0.00
17.224	39.200	1.868	2141.9	2003.1	38.070	4.899	2.69		Clay	36.6			37.05	1.01	n.a.	n.a.	0.94	0.448	n.a.	n.a.	n.a.	n.a.	0.00	0.00
17.388	32.800	1.713	2161.6	2012.6	31.521	5.400	2.77		Clay	39.8			31.00	1.01	n.a.	n.a.	0.94	0.449	n.a.	n.a.	n.a.	n.a.	0.00	0.00
17.552	26.060	1.464	2181.3	2022.0	24.697	5.862	2.88		Clay	43.6			24.63	1.01	n.a.	n.a.	0.94	0.450	n.a.	n.a.	n.a.	n.a.	0.00	0.00
17.717	22.000	1.324	2201.0	2031.5	20.576	6.333	2.96		Clay	46.9			20.79	1.01	n.a.	n.a.	0.94	0.451	n.a.	n.a.	n.a.	n.a.	0.00	0.00
17.881	20.000	1.172	2220.7	2040.9	18.511	6.204	2.98		Clay	48.0			18.90	1.01	n.a.	n.a.	0.94	0.452	n.a.	n.a.	n.a.	n.a.	0.00	0.00
18.045	16.710	1.110	2240.4	2050.4	15.207	7.123	3.09		Clay	52.5			15.79	1.01	n.a.	n.a.	0.94	0.452	n.a.	n.a.	n.a.	n.a.	0.00	0.00
18.209	15.540	0.899	2260.0	2059.8	13.992	6.235	3.08		Clay	52.0			14.69	1.01	n.a.	n.a.	0.93	0.453	n.a.	n.a.	n.a.	n.a.	0.00	0.00
18.373	22.290	0.633	2279.7	2069.3	20.442	2.994	2.75		Clay	38.7			21.07	1.01	n.a.	n.a.	0.93	0.454	n.a.	n.a.	n.a.	n.a.	0.00	0.00
18.537	16.180	0.745	2299.4	2078.7	14.461	4.956	3.00		Clay	48.7			15.29	1.00	n.a.	n.a.	0.93	0.455	n.a.	n.a.	n.a.	n.a.	0.00	0.00
18.701	14.690	0.813	2319.1	2088.2	12.959	6.009	3.09		Clay	52.6			13.88	1.00	n.a.	n.a.	0.93	0.455	n.a.	n.a.	n.a.	n.a.	0.00	0.00
18.865	14.090	0.743	2338.8	2097.6	12.319	5.752	3.10		Clay	52.8			13.32	1.00	n.a.	n.a.	0.93	0.456	n.a.	n.a.	n.a.	n.a.	0.00	0.00
19.029	12.970	0.687	2358.5	2107.1	11.192	5.827	3.13		Clay	54.4			12.26	1.00	n.a.	n.a.	0.93	0.457	n.a.	n.a.	n.a.	n.a.	0.00	0.00
19.193	12.880	0.693	2378.1	2116.5	11.047	5.925	3.14		Clay	54.9			12.17	1.00	n.a.	n.a.	0.93	0.457	n.a.	n.a.	n.a.	n.a.	0.00	0.00
19.357	13.150	0.674	2397.8	2126.0	11.243	5.635	3.12		Clay	54.0			12.43	1.00	n.a.	n.a.	0.93	0.458	n.a.	n.a.	n.a.	n.a.	0.00	0.00
19.521	12.640	0.640	2417.5	2135.4	10.706	5.596	3.13		Clay	54.6			11.95	1.00	n.a.	n.a.	0.93	0.459	n.a.	n.a.	n.a.	n.a.	0.00	0.00
19.685	12.020	0.591	2437.2	2144.9	10.072	5.469	3.15		Clay	55.3			11.36	1.00	n.a.	n.a.	0.93	0.459	n.a.	n.a.	n.a.	n.a.	0.00	0.00
19.849	11.170	0.483	2456.9	2154.3	9.229	4.861	3.15																	

Depth (ft)	q <sub>c</sub> (tsf)	f <sub>s</sub> (tsf)	σ <sub>vc</sub> (psf)	Insitu σ <sub>vc</sub> (psf)	Q	F (%)	lc	Layer "Plastic" PI > 7	Flag Soil Type	Fines (%)	q <sub>c-N</sub> near interfaces (soft layer)	Thin Layer Factor (K <sub>tl</sub> )	Interpreted q <sub>c-N</sub>	C <sub>N</sub>	q <sub>c1N</sub>	q <sub>c1N-CS</sub>	Stress Reduction Coeff. r <sub>d</sub>	CSR	K <sub>σ</sub> for Sand	CRR <sub>M=7.5</sub> σ <sub>vc</sub> = 1 atm	CRR	Factor of Safety (CRR/CSR)	Vertical Strain ε <sub>v</sub>	Settlement (Inches)
21.161	8.160	0.343	2614.4	2229.9	6.146	5.002	3.30		Clay	62.3			7.71	0.99	n.a.	n.a.	0.92	0.464	n.a.	n.a.	n.a.	n.a.	0.00	0.00
21.325	8.180	0.380	2634.1	2239.3	6.129	5.540	3.32		Clay	63.6			7.73	0.99	n.a.	n.a.	0.92	0.465	n.a.	n.a.	n.a.	n.a.	0.00	0.00
21.490	8.420	0.420	2653.7	2248.8	6.308	5.920	3.33		Clay	64.0			7.96	0.98	n.a.	n.a.	0.92	0.465	n.a.	n.a.	n.a.	n.a.	0.00	0.00
21.654	8.720	0.390	2673.4	2258.2	6.539	5.285	3.29		Clay	61.9			8.24	0.98	n.a.	n.a.	0.92	0.465	n.a.	n.a.	n.a.	n.a.	0.00	0.00
21.818	8.480	0.348	2693.1	2267.7	6.291	4.880	3.28		Clay	61.6			8.02	0.98	n.a.	n.a.	0.92	0.466	n.a.	n.a.	n.a.	n.a.	0.00	0.00
21.982	8.090	0.343	2712.8	2277.1	5.914	5.094	3.32		Clay	63.2			7.65	0.98	n.a.	n.a.	0.92	0.466	n.a.	n.a.	n.a.	n.a.	0.00	0.00
22.146	8.220	0.393	2732.5	2286.6	5.995	5.727	3.34		Clay	64.4			7.77	0.98	n.a.	n.a.	0.91	0.467	n.a.	n.a.	n.a.	n.a.	0.00	0.00
22.310	8.930	0.488	2752.2	2296.0	6.580	6.460	3.34		Clay	64.4			8.44	0.98	n.a.	n.a.	0.91	0.467	n.a.	n.a.	n.a.	n.a.	0.00	0.00
22.474	10.710	0.615	2771.9	2305.5	8.089	6.600	3.27		Clay	61.2			10.12	0.98	n.a.	n.a.	0.91	0.467	n.a.	n.a.	n.a.	n.a.	0.00	0.00
22.638	12.060	0.712	2791.5	2314.9	9.213	6.678	3.23		Clay	59.2			11.40	0.98	n.a.	n.a.	0.91	0.468	n.a.	n.a.	n.a.	n.a.	0.00	0.00
22.802	13.070	0.768	2811.2	2324.4	10.037	6.587	3.20		Clay	57.7			12.35	0.98	n.a.	n.a.	0.91	0.468	n.a.	n.a.	n.a.	n.a.	0.00	0.00
22.966	13.820	0.747	2830.9	2333.8	10.630	6.024	3.16		Clay	55.6			13.06	0.97	n.a.	n.a.	0.91	0.469	n.a.	n.a.	n.a.	n.a.	0.00	0.00
23.130	13.440	0.726	2850.6	2343.3	10.255	6.046	3.17		Clay	56.3			12.70	0.97	n.a.	n.a.	0.91	0.469	n.a.	n.a.	n.a.	n.a.	0.00	0.00
23.294	13.220	0.748	2870.3	2352.7	10.018	6.347	3.19		Clay	57.2			12.50	0.97	n.a.	n.a.	0.91	0.469	n.a.	n.a.	n.a.	n.a.	0.00	0.00
23.458	12.980	0.813	2890.0	2362.2	9.766	7.050	3.23		Clay	59.0			12.27	0.97	n.a.	n.a.	0.91	0.470	n.a.	n.a.	n.a.	n.a.	0.00	0.00
23.622	12.760	0.772	2909.6	2371.6	9.534	6.831	3.23		Clay	59.0			12.06	0.97	n.a.	n.a.	0.91	0.470	n.a.	n.a.	n.a.	n.a.	0.00	0.00
23.786	12.500	0.730	2929.3	2381.1	9.269	6.616	3.23		Clay	59.0			11.81	0.97	n.a.	n.a.	0.91	0.470	n.a.	n.a.	n.a.	n.a.	0.00	0.00
23.950	12.570	0.714	2949.0	2390.5	9.283	6.431	3.22		Clay	58.6			11.88	0.97	n.a.	n.a.	0.91	0.470	n.a.	n.a.	n.a.	n.a.	0.00	0.00
24.114	12.380	0.695	2968.7	2400.0	9.080	6.378	3.23		Clay	58.9			11.70	0.97	n.a.	n.a.	0.90	0.471	n.a.	n.a.	n.a.	n.a.	0.00	0.00
24.278	11.550	0.617	2988.4	2409.4	8.347	6.134	3.24		Clay	59.7			10.92	0.97	n.a.	n.a.	0.90	0.471	n.a.	n.a.	n.a.	n.a.	0.00	0.00
24.442	10.690	0.580	3008.1	2418.9	7.595	6.314	3.28		Clay	61.6			10.10	0.97	n.a.	n.a.	0.90	0.471	n.a.	n.a.	n.a.	n.a.	0.00	0.00
24.606	10.190	0.539	3027.8	2428.3	7.146	6.217	3.30		Clay	62.5			9.63	0.96	n.a.	n.a.	0.90	0.472	n.a.	n.a.	n.a.	n.a.	0.00	0.00
24.770	9.440	0.508	3047.4	2437.8	6.495	6.418	3.34		Clay	64.5			8.92	0.96	n.a.	n.a.	0.90	0.472	n.a.	n.a.	n.a.	n.a.	0.00	0.00
24.934	8.950	0.466	3067.1	2447.2	6.061	6.283	3.36		Clay	65.5			8.46	0.96	n.a.	n.a.	0.90	0.472	n.a.	n.a.	n.a.	n.a.	0.00	0.00
25.098	7.910	0.406	3086.8	2456.7	5.183	6.375	3.42		Clay	68.4			7.48	0.96	n.a.	n.a.	0.90	0.472	n.a.	n.a.	n.a.	n.a.	0.00	0.00
25.262	7.110	0.408	3106.5	2466.1	4.506	7.339	3.50		Clay	73.0			6.72	0.96	n.a.	n.a.	0.90	0.472	n.a.	n.a.	n.a.	n.a.	0.00	0.00
25.427	7.070	0.368	3126.2	2475.6	4.449	6.684	3.48		Clay	71.9			6.68	0.96	n.a.	n.a.	0.90	0.473	n.a.	n.a.	n.a.	n.a.	0.00	0.00
25.591	6.610	0.357	3145.9	2485.0	4.054	7.089	3.53		Clay	74.5			6.25	0.96	n.a.	n.a.	0.90	0.473	n.a.	n.a.	n.a.	n.a.	0.00	0.00
25.755	6.890	0.416	3165.6	2494.5	5.698	5.856	3.36		Clay	65.6			8.21	0.96	n.a.	n.a.	0.90	0.473	n.a.	n.a.	n.a.	n.a.	0.00	0.00
25.919	11.560	0.515	3185.2	2503.9	7.961	5.169	3.22		Clay	58.3			10.93	0.96	n.a.	n.a.	0.89	0.473	n.a.	n.a.	n.a.	n.a.	0.00	0.00
26.083	13.020	0.624	3204.9	2513.4	9.085	5.469	3.18		Clay	56.9			12.31	0.96	n.a.	n.a.	0.89	0.473	n.a.	n.a.	n.a.	n.a.	0.00	0.00
26.247	13.650	0.670	3224.6	2522.8	9.543	5.569	3.17		Clay	56.3			12.90	0.95	n.a.	n.a.	0.89	0.474	n.a.	n.a.	n.a.	n.a.	0.00	0.00
26.411	13.590	0.658	3244.3	2532.3	9.452	5.500	3.17		Clay	56.3			12.84	0.95	n.a.	n.a.	0.89	0.474	n.a.	n.a.	n.a.	n.a.	0.00	0.00
26.575	14.210	0.744	3264.0	2541.7	9.897	5.916	3.18		Clay	56.5			13.43	0.95	n.a.	n.a.	0.89	0.474	n.a.	n.a.	n.a.	n.a.	0.00	0.00
26.739	16.390	0.807	3283.7	2551.2	11.562	5.469	3.10		Clay	53.2			15.49	0.95	n.a.	n.a.	0.89	0.474	n.a.	n.a.	n.a.	n.a.	0.00	0.00
26.903	16.510	0.946	3303.3	2560.6	11.605	6.368	3.14		Clay	55.0			15.60	0.95	n.a.	n.a.	0.89	0.474	n.a.	n.a.	n.a.	n.a.	0.00	0.00
27.067	18.880	1.024	3323.0	2570.1	13.399	5.947	3.08		Clay	52.0			17.84	0.95	n.a.	n.a.	0.89	0.474	n.a.	n.a.	n.a.	n.a.	0.00	0.00
27.231	19.370	1.098	3342.7	2579.5	13.723	6.206	3.08		Clay	52.2			18.31	0.95	n.a.	n.a.	0.89	0.474	n.a.	n.a.	n.a.	n.a.	0.00	0.00
27.395	20.560	0.993	3362.4	2589.0	14.584	5.260	3.01		Clay	49.3			19.43	0.95	n.a.	n.a.	0.89	0.474	n.a.	n.a.	n.a.	n.a.	0.00	0.00
27.559	20.150	0.855	3382.1	2598.4	14.208	4.631	2.99		Clay	48.2			19.05	0.95	n.a.	n.a.	0.89	0.475	n.a.	n.a.	n.a.	n.a.	0.00	0.00
27.723	19.520	0.804	3401.8	2607.9	13.666	4.509	2.99		Clay	48.4			18.45	0.95	n.a.	n.a.	0.88	0.475	n.a.	n.a.	n.a.	n.a.	0.00	0.00
27.887	20.610	0.828	3421.5	2617.3	14.442	4.379	2.97		Clay	47.3			19.48	0.95	n.a.	n.a.	0.88	0.475	n.a.	n.a.	n.a.	n.a.	0.00	0.00
28.051	21.800	0.893	3441.1	2626.7	15.288	4.449	2.95		Clay	46.7			20.60	0.94	n.a.	n.a.	0.88	0.475	n.a.	n.a.	n.a.	n.a.	0.00	0.00
28.215	21.850	0.919	3460.8	2636.2	15.264	4.569	2.96		Clay	47.0			20.65	0.94	n.a.	n.a.	0.88	0.475	n.a.	n.a.	n.a.	n.a.	0.00	0.00
28.379	20.960	0.904	3480.5	2645.6	14.529	4.703	2.98		Clay	48.1			19.81	0.94	n.a.	n.a.	0.88	0.475	n.a.	n.a.	n.a.	n.a.	0.00	0.00
28.543	22.500	0.931	3500.2	2655.1	15.630	4.485	2.95		Clay	46.5			21.27	0.94	n.a.	n.a.	0.88	0.475	n.a.	n.a.	n.a.	n.a.	0.00	0.00
28.707	26.420	1.043	3519.9	2664.5	18.510	4.228	2.87		Clay	43.6			24.97	0.94	n.a.	n.a.	0.88	0.475	n.a.	n.a.	n.a.	n.a.	0.00	0.00
28.871	26.640	1.008	3539.6	2674.0	18.602	4.051	2.86		Clay	43.0			25.18	0.94	n.a.	n.a.	0.88	0.475	n.a.	n.a.	n.a.	n.a.	0.00	0.00
29.035	25.620	0.860	3559.3	2683.4	17.769	3.605	2.84		Clay	42.4			24.22	0.94	n.a.	n.a.	0.88	0.475	n.a.	n.a.	n.a.	n.a.	0.00	0.00
29.199	23.170	0.781	3579.9	2692.9	15.879	3.653	2.89		Clay	44.0			21.90	0.94	n.a.	n.a.	0.88	0.475	n.a.	n.a.	n.a.	n.a.	0.00	0.00
29.364	23.830	0.753	3598.6	2702.3	16.305	3.416	2.86		Clay	43.0			22.52	0.94	n.a.	n.a.	0.88	0.475	n.a.	n.a.	n.a.	n.a.	0.00	0.00
29.528	24.200	0.804	3618.3	2711.8	16.514	3.591	2.87		Clay	43.3			22.87	0.94	n.a.	n.a.	0.87	0.475	n.a.	n.a.	n.a.	n.a.	0.00	0.00
29.692	21.450	0.726	3638.0	2721.2	14.428	3.699	2.92		Clay	45.5			20.27	0.94	n.a.	n.a.	0.87	0.475	n.a.	n.a.	n.a.	n.a.	0.00	0.00
29.856	17.420	0.624	3657.7	2730.7	11.419	4.004	3.02		Clay	49.7			16.47	0.93	n.a.	n.a.	0.87	0.475	n.a.	n.a.	n.a.	n.a.	0.00	0.00
30.020	14.090	0.483	3677.4	2740.1	8.942	3.945	3.11		Clay	53.3			13.32	0.93	n.a.	n.a.	0.87	0.475	n.a.	n.a.	n.a.	n.a.	0.00	0.00
30.184	11.290	0.367	3697.0	2749.6	6.868	3.889	3.20		Clay	57.4			10.67	0.93	n.a.	n.a.	0.87	0.475	n.a.	n.a.	n.a.	n.a.	0.00	0.00
30.348	9.470	0.276	3716.7	2759.0	5.518	3.631	3.26		Clay	60.4			8.95	0.93	n.a.	n.a.</								

Depth (ft)	q <sub>c</sub> (tsf)	f <sub>s</sub> (tsf)	σ <sub>vc</sub> (psf)	In situ σ'vc (psf)	Q	F (%)	lc	Layer "Plastic" PI > 7	Flag Soil Type	Fines (%)	q <sub>c-N</sub> near interfaces (soft layer)	Thin Layer Factor (K <sub>tl</sub> )	Interpreted q <sub>c-N</sub>	C <sub>N</sub>	q <sub>c1-N</sub>	q <sub>c1-N-CS</sub>	Stress Reduction Coeff. r <sub>d</sub>	CSR	K <sub>σ</sub> for Sand	CRR <sub>M=7.5</sub> σ'vc = 1 atm	CRR	Factor of Safety (CRR/CSR)	Vertical Strain ε <sub>v</sub>	Settlement (Inches)
31.660	19.900	0.680	3874.2	2834.6	12.674	3.787	2.97		Clay	47.6			18.81	0.93	n.a.	n.a.	0.86	0.475	n.a.	n.a.	n.a.	n.a.	0.00	0.00
31.824	19.920	0.772	3893.9	2844.1	12.639	4.297	3.01		Clay	49.0			18.83	0.92	n.a.	n.a.	0.86	0.475	n.a.	n.a.	n.a.	n.a.	0.00	0.00
31.988	25.670	0.758	3913.6	2853.5	16.620	3.194	2.83		Clay	42.0			24.26	0.92	n.a.	n.a.	0.86	0.475	n.a.	n.a.	n.a.	n.a.	0.00	0.00
32.152	21.590	0.660	3933.3	2863.0	13.708	3.364	2.91		Clay	45.2			20.41	0.92	n.a.	n.a.	0.86	0.475	n.a.	n.a.	n.a.	n.a.	0.00	0.00
32.316	17.960	0.563	3953.0	2872.4	11.129	3.524	3.00		Clay	48.7			16.98	0.92	n.a.	n.a.	0.86	0.475	n.a.	n.a.	n.a.	n.a.	0.00	0.00
32.480	15.190	0.397	3972.6	2881.9	9.163	3.010	3.03		Clay	49.9			14.36	0.92	n.a.	n.a.	0.86	0.475	n.a.	n.a.	n.a.	n.a.	0.00	0.00
32.644	11.970	0.338	3992.3	2891.3	6.899	3.386	3.16		Clay	55.8			11.31	0.92	n.a.	n.a.	0.86	0.474	n.a.	n.a.	n.a.	n.a.	0.00	0.00
32.808	10.270	0.312	4012.0	2900.8	5.698	3.772	3.25		Clay	60.2			9.71	0.92	n.a.	n.a.	0.86	0.474	n.a.	n.a.	n.a.	n.a.	0.00	0.00
32.972	10.550	0.322	4031.7	2910.2	5.865	3.777	3.24		Clay	59.7			9.97	0.92	n.a.	n.a.	0.86	0.474	n.a.	n.a.	n.a.	n.a.	0.00	0.00
33.136	11.060	0.336	4051.4	2919.7	6.189	3.724	3.22		Clay	58.7			10.45	0.92	n.a.	n.a.	0.85	0.474	n.a.	n.a.	n.a.	n.a.	0.00	0.00
33.301	11.290	0.264	4071.1	2929.1	6.319	2.855	3.15		Clay	55.4			10.67	0.92	n.a.	n.a.	0.85	0.474	n.a.	n.a.	n.a.	n.a.	0.00	0.00
33.465	11.690	0.212	4090.7	2938.6	6.564	2.198	3.08		Clay	52.1			11.05	0.92	n.a.	n.a.	0.85	0.474	n.a.	n.a.	n.a.	n.a.	0.00	0.00
33.629	10.000	0.225	4110.4	2948.0	5.390	2.832	3.21		Clay	58.0			9.45	0.92	n.a.	n.a.	0.85	0.474	n.a.	n.a.	n.a.	n.a.	0.00	0.00
33.793	9.960	0.226	4130.1	2957.5	5.339	2.864	3.21		Clay	58.3			9.41	0.92	n.a.	n.a.	0.85	0.474	n.a.	n.a.	n.a.	n.a.	0.00	0.00
33.957	9.800	0.218	4149.8	2966.9	5.208	2.822	3.22		Clay	58.6			9.26	0.91	n.a.	n.a.	0.85	0.474	n.a.	n.a.	n.a.	n.a.	0.00	0.00
34.121	11.460	0.265	4169.5	2976.4	6.300	2.823	3.15		Clay	55.3			10.83	0.91	n.a.	n.a.	0.85	0.473	n.a.	n.a.	n.a.	n.a.	0.00	0.00
34.285	12.050	0.316	4189.2	2985.8	6.668	3.178	3.16		Clay	55.6			11.39	0.91	n.a.	n.a.	0.85	0.473	n.a.	n.a.	n.a.	n.a.	0.00	0.00
34.449	12.890	0.229	4208.9	2995.3	7.202	2.122	3.04		Clay	50.3			12.18	0.91	n.a.	n.a.	0.85	0.473	n.a.	n.a.	n.a.	n.a.	0.00	0.00
34.613	11.370	0.220	4228.5	3004.7	6.161	2.380	3.12		Clay	53.9			10.75	0.91	n.a.	n.a.	0.85	0.473	n.a.	n.a.	n.a.	n.a.	0.00	0.00
34.777	8.870	0.480	4248.2	3014.1	4.476	7.114	3.50		Clay	72.7			8.38	0.91	n.a.	n.a.	0.84	0.473	n.a.	n.a.	n.a.	n.a.	0.00	0.00
34.941	11.310	0.670	4267.9	3023.6	6.070	7.303	3.40		Clay	67.5			10.69	0.91	n.a.	n.a.	0.84	0.473	n.a.	n.a.	n.a.	n.a.	0.00	0.00
35.105	18.590	0.749	4287.6	3033.0	10.845	4.554	3.08		Clay	52.0			17.57	0.91	n.a.	n.a.	0.84	0.473	n.a.	n.a.	n.a.	n.a.	0.00	0.00
35.269	20.500	0.754	4307.3	3042.5	12.060	4.108	3.01		Clay	49.2			19.38	0.91	n.a.	n.a.	0.84	0.472	n.a.	n.a.	n.a.	n.a.	0.00	0.00
35.433	20.440	0.725	4327.0	3051.9	11.977	3.965	3.00		Clay	48.9			19.32	0.91	n.a.	n.a.	0.84	0.472	n.a.	n.a.	n.a.	n.a.	0.00	0.00
35.597	20.460	0.798	4346.7	3061.4	11.947	4.366	3.03		Clay	50.0			19.34	0.91	n.a.	n.a.	0.84	0.472	n.a.	n.a.	n.a.	n.a.	0.00	0.00
35.761	20.220	0.752	4366.3	3070.8	11.747	4.169	3.02		Clay	49.7			19.11	0.91	n.a.	n.a.	0.84	0.472	n.a.	n.a.	n.a.	n.a.	0.00	0.00
35.925	17.330	0.732	4386.0	3080.3	9.828	4.838	3.13		Clay	54.2			16.38	0.91	n.a.	n.a.	0.84	0.472	n.a.	n.a.	n.a.	n.a.	0.00	0.00
36.089	15.400	0.609	4405.7	3089.7	8.543	4.616	3.16		Clay	55.8			14.56	0.90	n.a.	n.a.	0.84	0.472	n.a.	n.a.	n.a.	n.a.	0.00	0.00
36.253	12.400	0.514	4425.4	3099.2	6.574	5.046	3.28		Clay	61.2			11.72	0.90	n.a.	n.a.	0.84	0.471	n.a.	n.a.	n.a.	n.a.	0.00	0.00
36.417	10.160	0.393	4445.1	3108.6	5.107	4.954	3.36		Clay	65.4			9.60	0.90	n.a.	n.a.	0.84	0.471	n.a.	n.a.	n.a.	n.a.	0.00	0.00
36.581	9.720	0.289	4464.8	3118.1	4.803	3.853	3.32		Clay	63.5			9.19	0.90	n.a.	n.a.	0.83	0.471	n.a.	n.a.	n.a.	n.a.	0.00	0.00
36.745	9.910	0.217	4484.4	3127.5	4.903	2.829	3.24		Clay	59.7			9.37	0.90	n.a.	n.a.	0.83	0.471	n.a.	n.a.	n.a.	n.a.	0.00	0.00
36.909	8.990	0.182	4504.1	3137.0	4.296	2.700	3.28		Clay	61.6			8.50	0.90	n.a.	n.a.	0.83	0.471	n.a.	n.a.	n.a.	n.a.	0.00	0.00
37.073	8.960	0.177	4523.8	3146.4	4.258	2.637	3.28		Clay	61.5			8.47	0.90	n.a.	n.a.	0.83	0.471	n.a.	n.a.	n.a.	n.a.	0.00	0.00
37.238	9.350	0.174	4543.5	3155.9	4.486	2.461	3.25		Clay	59.8			8.84	0.90	n.a.	n.a.	0.83	0.470	n.a.	n.a.	n.a.	n.a.	0.00	0.00
37.402	9.890	0.177	4563.2	3165.3	4.807	2.322	3.21		Clay	58.0			9.35	0.90	n.a.	n.a.	0.83	0.470	n.a.	n.a.	n.a.	n.a.	0.00	0.00
37.566	10.900	0.221	4582.9	3174.8	5.423	2.561	3.18		Clay	56.9			10.30	0.90	n.a.	n.a.	0.83	0.470	n.a.	n.a.	n.a.	n.a.	0.00	0.00
37.730	12.370	0.192	4602.6	3184.2	6.324	1.907	3.06		Clay	51.4			11.69	0.90	n.a.	n.a.	0.83	0.470	n.a.	n.a.	n.a.	n.a.	0.00	0.00
37.894	14.700	0.200	4622.2	3193.7	7.758	1.614	2.95		Clay	46.6			13.89	0.90	n.a.	n.a.	0.83	0.469	n.a.	n.a.	n.a.	n.a.	0.00	0.00
38.058	12.990	0.375	4641.9	3203.1	6.662	3.519	3.18		Clay	56.8			12.28	0.90	n.a.	n.a.	0.83	0.469	n.a.	n.a.	n.a.	n.a.	0.00	0.00
38.222	12.030	0.231	4661.6	3212.6	6.038	2.376	3.13		Clay	54.3			11.37	0.90	n.a.	n.a.	0.82	0.469	n.a.	n.a.	n.a.	n.a.	0.00	0.00
38.386	11.690	0.201	4681.3	3222.0	5.803	2.147	3.12		Clay	53.9			11.05	0.89	n.a.	n.a.	0.82	0.469	n.a.	n.a.	n.a.	n.a.	0.00	0.00
38.550	10.000	0.176	4701.0	3231.5	4.734	2.303	3.21		Clay	58.2			9.45	0.89	n.a.	n.a.	0.82	0.469	n.a.	n.a.	n.a.	n.a.	0.00	0.00
38.714	9.980	0.179	4720.7	3240.9	4.702	2.353	3.22		Clay	58.5			9.43	0.89	n.a.	n.a.	0.82	0.468	n.a.	n.a.	n.a.	n.a.	0.00	0.00
38.878	10.370	0.209	4740.4	3250.4	4.922	2.609	3.22		Clay	58.7			9.80	0.89	n.a.	n.a.	0.82	0.468	n.a.	n.a.	n.a.	n.a.	0.00	0.00
39.042	10.480	0.236	4760.0	3259.8	4.970	2.912	3.24		Clay	59.7			9.91	0.89	n.a.	n.a.	0.82	0.468	n.a.	n.a.	n.a.	n.a.	0.00	0.00
39.206	10.590	0.264	4779.7	3269.3	5.016	3.221	3.26		Clay	61.4			10.01	0.89	n.a.	n.a.	0.82	0.468	n.a.	n.a.	n.a.	n.a.	0.00	0.00
39.370	10.450	0.310	4799.4	3278.7	4.911	3.845	3.31		Clay	63.1			9.88	0.89	n.a.	n.a.	0.82	0.467	n.a.	n.a.	n.a.	n.a.	0.00	0.00
39.534	10.670	0.339	4819.1	3288.2	5.024	4.105	3.32		Clay	63.4			10.09	0.89	n.a.	n.a.	0.82	0.467	n.a.	n.a.	n.a.	n.a.	0.00	0.00
39.698	11.840	0.320	4838.8	3297.6	5.714	3.399	3.23		Clay	59.0			11.19	0.89	n.a.	n.a.	0.82	0.467	n.a.	n.a.	n.a.	n.a.	0.00	0.00
39.862	11.580	0.293	4858.5	3307.1	5.534	3.203	3.23		Clay	58.9			10.95	0.89	n.a.	n.a.	0.82	0.467	n.a.	n.a.	n.a.	n.a.	0.00	0.00
40.026	11.020	0.273	4878.1	3316.5	5.175	3.179	3.25		Clay	60.0			10.42	0.89	n.a.	n.a.	0.81	0.466	n.a.	n.a.	n.a.	n.a.	0.00	0.00
40.190	10.760	0.253	4897.8	3326.0	4.998	3.039	3.25		Clay	60.1			10.17	0.89	n.a.	n.a.	0.81	0.466	n.a.	n.a.	n.a.	n.a.	0.00	0.00
40.354	10.960	0.257	4917.5	3335.4	5.098	3.022	3.24		Clay	59.7			10.36	0.89	n.a.	n.a.	0.81	0.466	n.a.	n.a.	n.a.	n.a.	0.00	0.00
40.518	11.490	0.249	4937.2	3344.9	5.394	2.763	3.20		Clay	57.7			10.86	0.89	n.a.	n.a.	0.81	0.466	n.a.	n.a.	n.a.	n.a.	0.00	0.00
40.682	11.940	0.255	4956.9	3354.3	5.641	2.697	3.18		Clay	56.7			11.29	0.89	n.a.	n.a.	0.81	0.465	n.a.	n.a.	n.a.	n.a.	0.00	0.00
40.846	11.640	0.218	4976.6	3363.8	5.441	2.379	3.17		Clay	56.0			11.00	0.88	n.a.	n.a.	0.81	0.465						

Depth (ft)	q <sub>c</sub> (tsf)	f <sub>s</sub> (tsf)	σ <sub>vc</sub> (psf)	In situ σ'vc (psf)	Q	F (%)	lc	Layer "Plastic" PI > 7	Flag Soil Type	Fines (%)	Qc-N near interfaces (soft layer)	Thin Layer Factor (K <sub>ti</sub> )	Interpreted q <sub>cN</sub>	C <sub>N</sub>	q <sub>c1N</sub>	q <sub>c1N-CS</sub>	Stress Reduction Coeff. r <sub>d</sub>	CSR	K <sub>σ</sub> for Sand	CRR <sub>M=7.5</sub> σ'vc = 1 atm	CRR	Factor of Safety (CRR/CSR)	Vertical Strain ε <sub>v</sub>	Settlement (Inches)
42.159	12.160	0.162	5134.1	3439.3	5.578	1.691	3.08		Clay	52.4			11.49	0.88	n.a.	n.a.	0.80	0.463	n.a.	n.a.	n.a.	n.a.	0.00	0.00
42.323	12.570	0.143	5153.7	3448.8	5.795	1.435	3.04		Clay	50.3			11.88	0.88	n.a.	n.a.	0.80	0.463	n.a.	n.a.	n.a.	n.a.	0.00	0.00
42.487	12.580	0.160	5173.4	3458.2	5.779	1.605	3.06		Clay	51.3			11.89	0.88	n.a.	n.a.	0.80	0.462	n.a.	n.a.	n.a.	n.a.	0.00	0.00
42.651	12.950	0.184	5193.1	3467.7	5.971	1.778	3.07		Clay	51.7			12.24	0.88	n.a.	n.a.	0.80	0.462	n.a.	n.a.	n.a.	n.a.	0.00	0.00
42.815	13.630	0.274	5212.8	3477.1	6.341	2.486	3.12		Clay	53.9			12.88	0.88	n.a.	n.a.	0.80	0.462	n.a.	n.a.	n.a.	n.a.	0.00	0.00
42.979	14.210	0.330	5232.5	3486.6	6.650	2.843	3.13		Clay	54.5			13.43	0.88	n.a.	n.a.	0.80	0.461	n.a.	n.a.	n.a.	n.a.	0.00	0.00
43.143	15.020	0.325	5252.2	3496.0	7.090	2.623	3.09		Clay	52.6			14.20	0.88	n.a.	n.a.	0.80	0.461	n.a.	n.a.	n.a.	n.a.	0.00	0.00
43.307	14.430	0.316	5271.9	3505.5	6.729	2.682	3.11		Clay	53.7			13.64	0.88	n.a.	n.a.	0.80	0.461	n.a.	n.a.	n.a.	n.a.	0.00	0.00
43.471	12.770	0.361	5291.5	3514.9	5.761	3.564	3.24		Clay	59.4			12.07	0.87	n.a.	n.a.	0.79	0.461	n.a.	n.a.	n.a.	n.a.	0.00	0.00
43.635	12.800	0.423	5311.2	3524.4	5.757	4.171	3.28		Clay	61.2			12.10	0.87	n.a.	n.a.	0.79	0.460	n.a.	n.a.	n.a.	n.a.	0.00	0.00
43.799	12.940	0.428	5330.9	3533.8	5.815	4.163	3.27		Clay	61.0			12.23	0.87	n.a.	n.a.	0.79	0.460	n.a.	n.a.	n.a.	n.a.	0.00	0.00
43.963	13.170	0.423	5350.6	3543.3	5.924	4.026	3.26		Clay	60.3			12.45	0.87	n.a.	n.a.	0.79	0.460	n.a.	n.a.	n.a.	n.a.	0.00	0.00
44.127	13.710	0.379	5370.3	3552.7	6.206	3.439	3.20		Clay	57.7			12.96	0.87	n.a.	n.a.	0.79	0.459	n.a.	n.a.	n.a.	n.a.	0.00	0.00
44.291	13.210	0.461	5390.0	3562.2	5.904	4.385	3.28		Clay	61.4			12.49	0.87	n.a.	n.a.	0.79	0.459	n.a.	n.a.	n.a.	n.a.	0.00	0.00
44.455	12.910	0.429	5409.6	3571.6	5.715	4.205	3.28		Clay	61.4			12.20	0.87	n.a.	n.a.	0.79	0.459	n.a.	n.a.	n.a.	n.a.	0.00	0.00
44.619	12.930	0.483	5429.3	3581.1	5.705	4.730	3.31		Clay	62.9			12.22	0.87	n.a.	n.a.	0.79	0.458	n.a.	n.a.	n.a.	n.a.	0.00	0.00
44.783	10.560	0.428	5449.0	3590.5	4.365	5.457	3.44		Clay	69.6			9.98	0.87	n.a.	n.a.	0.79	0.458	n.a.	n.a.	n.a.	n.a.	0.00	0.00
44.948	12.060	0.365	5468.7	3600.0	5.181	3.917	3.30		Clay	62.3			11.40	0.87	n.a.	n.a.	0.79	0.458	n.a.	n.a.	n.a.	n.a.	0.00	0.00
45.112	12.390	0.355	5488.4	3609.4	5.345	3.682	3.27		Clay	61.1			11.71	0.87	n.a.	n.a.	0.78	0.457	n.a.	n.a.	n.a.	n.a.	0.00	0.00
45.276	13.050	0.400	5508.1	3618.9	5.690	3.883	3.26		Clay	60.6			12.33	0.87	n.a.	n.a.	0.78	0.457	n.a.	n.a.	n.a.	n.a.	0.00	0.00
45.440	13.330	0.429	5527.8	3628.3	5.824	4.059	3.26		Clay	60.7			12.60	0.87	n.a.	n.a.	0.78	0.457	n.a.	n.a.	n.a.	n.a.	0.00	0.00
45.604	13.000	0.434	5547.4	3637.8	5.622	4.247	3.29		Clay	61.9			12.29	0.87	n.a.	n.a.	0.78	0.457	n.a.	n.a.	n.a.	n.a.	0.00	0.00
45.768	13.270	0.464	5567.1	3647.2	5.750	4.429	3.29		Clay	62.0			12.54	0.87	n.a.	n.a.	0.78	0.456	n.a.	n.a.	n.a.	n.a.	0.00	0.00
45.932	13.780	0.478	5586.8	3656.7	6.009	4.350	3.27		Clay	61.0			13.02	0.87	n.a.	n.a.	0.78	0.456	n.a.	n.a.	n.a.	n.a.	0.00	0.00
46.096	14.010	0.474	5606.5	3666.1	6.114	4.226	3.26		Clay	60.3			13.24	0.87	n.a.	n.a.	0.78	0.456	n.a.	n.a.	n.a.	n.a.	0.00	0.00
46.260	14.410	0.437	5626.2	3675.6	6.310	3.771	3.22		Clay	58.5			13.62	0.86	n.a.	n.a.	0.78	0.455	n.a.	n.a.	n.a.	n.a.	0.00	0.00
46.424	15.550	0.402	5645.9	3685.0	6.907	3.159	3.14		Clay	55.0			14.70	0.86	n.a.	n.a.	0.78	0.455	n.a.	n.a.	n.a.	n.a.	0.00	0.00
46.588	16.980	0.381	5665.6	3694.5	7.659	2.690	3.07		Clay	51.6			16.05	0.86	n.a.	n.a.	0.78	0.455	n.a.	n.a.	n.a.	n.a.	0.00	0.00
46.752	20.350	0.412	5685.2	3703.9	9.453	2.352	2.96		Clay	47.0			19.23	0.86	n.a.	n.a.	0.78	0.454	n.a.	n.a.	n.a.	n.a.	0.00	0.00
46.916	19.530	0.489	5704.9	3713.4	8.982	2.934	3.03		Clay	50.0			18.46	0.86	n.a.	n.a.	0.77	0.454	n.a.	n.a.	n.a.	n.a.	0.00	0.00
47.080	22.480	0.598	5724.6	3722.8	10.539	3.049	2.98		Clay	48.0			21.25	0.86	n.a.	n.a.	0.77	0.454	n.a.	n.a.	n.a.	n.a.	0.00	0.00
47.244	23.450	0.767	5744.3	3732.3	11.027	3.726	3.02		Clay	49.4			22.16	0.86	n.a.	n.a.	0.77	0.453	n.a.	n.a.	n.a.	n.a.	0.00	0.00
47.408	22.690	0.906	5764.0	3741.7	10.588	4.575	3.08		Clay	52.4			21.45	0.86	n.a.	n.a.	0.77	0.453	n.a.	n.a.	n.a.	n.a.	0.00	0.00
47.572	21.770	0.903	5783.7	3751.2	10.065	4.784	3.11		Clay	53.7			20.58	0.86	n.a.	n.a.	0.77	0.453	n.a.	n.a.	n.a.	n.a.	0.00	0.00
47.736	20.320	0.887	5803.3	3760.6	9.264	5.089	3.16		Clay	55.7			19.21	0.86	n.a.	n.a.	0.77	0.452	n.a.	n.a.	n.a.	n.a.	0.00	0.00
47.900	20.760	0.843	5823.0	3770.1	9.469	4.720	3.13		Clay	54.5			19.62	0.86	n.a.	n.a.	0.77	0.452	n.a.	n.a.	n.a.	n.a.	0.00	0.00
48.064	19.050	0.860	5842.7	3779.5	8.535	5.331	3.20		Clay	57.6			18.01	0.86	n.a.	n.a.	0.77	0.451	n.a.	n.a.	n.a.	n.a.	0.00	0.00
48.228	16.980	0.730	5862.4	3789.0	7.416	5.193	3.24		Clay	59.6			16.05	0.86	n.a.	n.a.	0.77	0.451	n.a.	n.a.	n.a.	n.a.	0.00	0.00
48.392	15.980	0.625	5882.1	3798.4	6.865	4.795	3.25		Clay	59.9			15.10	0.86	n.a.	n.a.	0.77	0.451	n.a.	n.a.	n.a.	n.a.	0.00	0.00
48.556	14.790	0.575	5901.8	3807.9	6.218	4.855	3.29		Clay	61.7			13.98	0.86	n.a.	n.a.	0.77	0.450	n.a.	n.a.	n.a.	n.a.	0.00	0.00
48.720	15.330	0.608	5921.5	3817.3	6.481	4.919	3.27		Clay	61.2			14.49	0.86	n.a.	n.a.	0.76	0.450	n.a.	n.a.	n.a.	n.a.	0.00	0.00
48.885	16.830	0.692	5941.1	3826.7	7.243	4.989	3.24		Clay	59.5			15.91	0.86	n.a.	n.a.	0.76	0.450	n.a.	n.a.	n.a.	n.a.	0.00	0.00
49.049	18.630	0.821	5960.8	3836.2	8.159	5.243	3.21		Clay	58.1			17.61	0.85	n.a.	n.a.	0.76	0.449	n.a.	n.a.	n.a.	n.a.	0.00	0.00
49.213	20.710	0.903	5980.5	3845.6	9.215	5.094	3.16		Clay	55.8			19.57	0.85	n.a.	n.a.	0.76	0.449	n.a.	n.a.	n.a.	n.a.	0.00	0.00
49.377	22.220	0.859	6000.2	3855.1	9.971	4.469	3.10		Clay	53.0			21.00	0.85	n.a.	n.a.	0.76	0.449	n.a.	n.a.	n.a.	n.a.	0.00	0.00
49.541	20.410	0.772	6019.9	3864.5	9.005	4.438	3.13		Clay	54.5			19.29	0.85	n.a.	n.a.	0.76	0.448	n.a.	n.a.	n.a.	n.a.	0.00	0.00
49.705	17.830	0.704	6039.6	3874.0	7.646	4.753	3.21		Clay	58.0			16.85	0.85	n.a.	n.a.	0.76	0.448	n.a.	n.a.	n.a.	n.a.	0.00	0.00
49.869	16.830	0.621	6059.3	3883.4	7.107	4.496	3.22		Clay	58.5			15.91	0.85	n.a.	n.a.	0.76	0.448	n.a.	n.a.	n.a.	n.a.	0.00	0.00
50.033	14.960	0.549	6078.9	3892.9	6.124	4.604	3.28		Clay	61.3			14.14	0.85	n.a.	n.a.	0.76	0.447	n.a.	n.a.	n.a.	n.a.	0.00	0.00
50.197	13.670	0.471	6098.6	3902.3	5.443	4.430	3.31		Clay	62.9			12.92	0.85	n.a.	n.a.	0.76	0.447	n.a.	n.a.	n.a.	n.a.	0.00	0.00
50.361	13.740	0.470	6118.3	3911.8	5.461	4.403	3.31		Clay	62.8			12.99	0.85	n.a.	n.a.	0.76	0.447	n.a.	n.a.	n.a.	n.a.	0.00	0.00
50.525	14.310	0.527	6138.0	3921.2	5.733	4.689	3.31		Clay	62.7			13.53	0.85	n.a.	n.a.	0.75	0.446	n.a.	n.a.	n.a.	n.a.	0.00	0.00
50.689	14.660	0.553	6157.7	3930.7	5.893	4.778	3.30		Clay	62.5			13.86	0.85	n.a.	n.a.	0.75	0.446	n.a.	n.a.	n.a.	n.a.	0.00	0.00
50.853	14.600	0.501	6177.4	3940.1	5.843	4.350	3.28		Clay	61.5			13.80	0.85	n.a.	n.a.	0.75	0.445	n.a.	n.a.	n.a.	n.a.	0.00	0.00
51.017	13.630	0.466	6197.0	3949.6	5.333	4.426	3.32		Clay	63.3			12.88	0.85	n.a.	n.a.	0.75	0.445	n.a.	n.a.	n.a.	n.a.	0.00	0.00
51.181	14.680	0.542	6216.7	3959.0	5.846	4.682	3.30		Clay	62.3			13.88	0.85	n.a.	n.a.	0.75	0.445	n.a.	n.a.	n.a.	n.a.	0.00	0.00
51.345	15.360	0.547	6236.4	3968.5	6.170	4.469	3.27		Clay	60.8			14.52	0.85	n.a.	n.a.								

Depth (ft)	q <sub>c</sub> (tsf)	f <sub>s</sub> (tsf)	σ <sub>vc</sub> (psf)	In situ σ'vc (psf)	Q	F (%)	lc	Layer "Plastic" PI > 7	Flag Soil Type	Fines (%)	q <sub>c</sub> -N near interfaces (soft layer)	Thin Layer Factor (K <sub>tl</sub> )	Interpreted q <sub>c</sub> -N	C <sub>N</sub>	q <sub>c</sub> -1N	q <sub>c</sub> -1N-CS	Stress Reduction Coeff. r <sub>d</sub>	CSR	K <sub>σ</sub> for Sand	CRR <sub>M=7.5</sub> σ'vc = 1 atm	CRR	Factor of Safety (CRR/CSR)	Vertical Strain ε <sub>v</sub>	Settlement (Inches)
52.657	14.620	0.414	6393.9	4044.1	5.649	3.626	3.25		Clay	59.9			13.82	0.84	n.a.	n.a.	0.74	0.441	n.a.	n.a.	n.a.	n.a.	0.00	0.00
52.822	14.590	0.432	6413.6	4053.5	5.616	3.799	3.26		Clay	60.6			13.79	0.84	n.a.	n.a.	0.74	0.441	n.a.	n.a.	n.a.	n.a.	0.00	0.00
52.986	14.370	0.392	6433.3	4063.0	5.490	3.514	3.25		Clay	60.1			13.58	0.84	n.a.	n.a.	0.74	0.441	n.a.	n.a.	n.a.	n.a.	0.00	0.00
53.150	13.330	0.376	6453.0	4072.4	4.962	3.724	3.30		Clay	62.5			12.60	0.84	n.a.	n.a.	0.74	0.440	n.a.	n.a.	n.a.	n.a.	0.00	0.00
53.314	13.130	0.361	6472.6	4081.9	4.848	3.647	3.31		Clay	62.7			12.41	0.84	n.a.	n.a.	0.74	0.440	n.a.	n.a.	n.a.	n.a.	0.00	0.00
53.478	13.550	0.361	6492.3	4091.3	5.037	3.503	3.28		Clay	61.6			12.81	0.84	n.a.	n.a.	0.74	0.440	n.a.	n.a.	n.a.	n.a.	0.00	0.00
53.642	13.900	0.367	6512.0	4100.8	5.191	3.446	3.27		Clay	60.8			13.14	0.84	n.a.	n.a.	0.74	0.439	n.a.	n.a.	n.a.	n.a.	0.00	0.00
53.806	14.730	0.364	6531.7	4110.2	5.578	3.172	3.22		Clay	58.6			13.92	0.84	n.a.	n.a.	0.74	0.439	n.a.	n.a.	n.a.	n.a.	0.00	0.00
53.970	15.850	0.428	6551.4	4119.7	6.105	3.401	3.21		Clay	57.9			14.98	0.84	n.a.	n.a.	0.74	0.438	n.a.	n.a.	n.a.	n.a.	0.00	0.00
54.134	19.270	0.400	6571.1	4129.1	7.742	2.500	3.05		Clay	50.7			18.21	0.84	n.a.	n.a.	0.73	0.438	n.a.	n.a.	n.a.	n.a.	0.00	0.00
54.298	17.210	0.399	6590.7	4138.6	6.724	2.867	3.13		Clay	54.4			16.27	0.84	n.a.	n.a.	0.73	0.438	n.a.	n.a.	n.a.	n.a.	0.00	0.00
54.462	14.860	0.431	6610.4	4148.0	5.571	3.732	3.26		Clay	60.5			14.05	0.84	n.a.	n.a.	0.73	0.437	n.a.	n.a.	n.a.	n.a.	0.00	0.00
54.626	16.780	0.440	6630.1	4157.5	6.477	3.266	3.17		Clay	56.4			15.86	0.84	n.a.	n.a.	0.73	0.437	n.a.	n.a.	n.a.	n.a.	0.00	0.00
54.790	16.430	0.361	6649.8	4166.9	6.290	2.754	3.15		Clay	55.1			15.53	0.84	n.a.	n.a.	0.73	0.437	n.a.	n.a.	n.a.	n.a.	0.00	0.00
54.954	15.510	0.314	6669.5	4176.4	5.831	2.578	3.16		Clay	55.7			14.66	0.84	n.a.	n.a.	0.73	0.436	n.a.	n.a.	n.a.	n.a.	0.00	0.00
55.118	14.210	0.287	6689.2	4185.8	5.192	2.640	3.21		Clay	57.9			13.43	0.84	n.a.	n.a.	0.73	0.436	n.a.	n.a.	n.a.	n.a.	0.00	0.00
55.282	12.950	0.286	6708.9	4195.3	4.574	2.985	3.28		Clay	61.5			12.24	0.83	n.a.	n.a.	0.73	0.435	n.a.	n.a.	n.a.	n.a.	0.00	0.00
55.446	12.860	0.290	6728.5	4204.7	4.517	3.050	3.29		Clay	62.0			12.16	0.83	n.a.	n.a.	0.73	0.435	n.a.	n.a.	n.a.	n.a.	0.00	0.00
55.610	13.870	0.316	6748.2	4214.1	4.981	3.006	3.25		Clay	60.0			13.11	0.83	n.a.	n.a.	0.73	0.435	n.a.	n.a.	n.a.	n.a.	0.00	0.00
55.774	14.480	0.393	6767.9	4223.6	5.254	3.540	3.27		Clay	60.9			13.69	0.83	n.a.	n.a.	0.73	0.434	n.a.	n.a.	n.a.	n.a.	0.00	0.00
55.938	16.690	0.395	6787.6	4233.0	6.282	2.968	3.16		Clay	55.9			15.78	0.83	n.a.	n.a.	0.72	0.434	n.a.	n.a.	n.a.	n.a.	0.00	0.00
56.102	16.580	0.456	6807.3	4242.5	6.212	3.457	3.20		Clay	57.8			15.67	0.83	n.a.	n.a.	0.72	0.433	n.a.	n.a.	n.a.	n.a.	0.00	0.00
56.266	18.270	0.518	6827.0	4251.9	6.988	3.485	3.16		Clay	55.9			17.27	0.83	n.a.	n.a.	0.72	0.433	n.a.	n.a.	n.a.	n.a.	0.00	0.00
56.430	21.690	0.473	6846.7	4261.4	8.573	2.587	3.02		Clay	49.4			20.50	0.83	n.a.	n.a.	0.72	0.433	n.a.	n.a.	n.a.	n.a.	0.00	0.00
56.594	17.580	0.400	6866.3	4270.8	6.625	2.826	3.13		Clay	54.5			16.62	0.83	n.a.	n.a.	0.72	0.432	n.a.	n.a.	n.a.	n.a.	0.00	0.00
56.759	14.600	0.320	6886.0	4280.3	5.213	2.864	3.22		Clay	58.7			13.80	0.83	n.a.	n.a.	0.72	0.432	n.a.	n.a.	n.a.	n.a.	0.00	0.00
56.923	13.650	0.312	6905.7	4289.7	4.754	3.063	3.27		Clay	61.1			12.90	0.83	n.a.	n.a.	0.72	0.432	n.a.	n.a.	n.a.	n.a.	0.00	0.00
57.087	14.670	0.309	6925.4	4299.2	5.214	2.753	3.21		Clay	58.3			13.87	0.83	n.a.	n.a.	0.72	0.431	n.a.	n.a.	n.a.	n.a.	0.00	0.00
57.251	14.530	0.368	6945.1	4308.6	5.133	3.330	3.26		Clay	60.6			13.73	0.83	n.a.	n.a.	0.72	0.431	n.a.	n.a.	n.a.	n.a.	0.00	0.00
57.415	15.380	0.417	6964.8	4318.1	5.511	3.502	3.25		Clay	60.0			14.54	0.83	n.a.	n.a.	0.72	0.430	n.a.	n.a.	n.a.	n.a.	0.00	0.00
57.579	17.130	0.501	6984.4	4327.5	6.303	3.674	3.21		Clay	58.2			16.19	0.83	n.a.	n.a.	0.72	0.430	n.a.	n.a.	n.a.	n.a.	0.00	0.00
57.743	14.920	0.436	7004.1	4337.0	5.265	3.819	3.29		Clay	61.8			14.10	0.83	n.a.	n.a.	0.71	0.430	n.a.	n.a.	n.a.	n.a.	0.00	0.00
57.907	15.030	0.349	7023.8	4346.4	5.300	3.030	3.23		Clay	59.0			14.21	0.83	n.a.	n.a.	0.71	0.429	n.a.	n.a.	n.a.	n.a.	0.00	0.00
58.071	12.810	0.333	7043.5	4355.9	4.265	3.585	3.35		Clay	64.8			12.11	0.83	n.a.	n.a.	0.71	0.429	n.a.	n.a.	n.a.	n.a.	0.00	0.00
58.235	12.960	0.513	7063.2	4365.3	4.320	5.445	3.44		Clay	69.7			12.25	0.83	n.a.	n.a.	0.71	0.429	n.a.	n.a.	n.a.	n.a.	0.00	0.00
58.399	27.120	0.593	7082.9	4374.8	10.779	2.513	2.93		Clay	45.7			25.63	0.83	n.a.	n.a.	0.71	0.428	n.a.	n.a.	n.a.	n.a.	0.00	0.00
58.563	23.940	0.695	7102.6	4384.2	9.301	3.410	3.05		Clay	51.0			22.63	0.83	n.a.	n.a.	0.71	0.428	n.a.	n.a.	n.a.	n.a.	0.00	0.00
58.727	23.660	0.645	7122.2	4393.7	9.149	3.210	3.05		Clay	50.7			22.36	0.82	n.a.	n.a.	0.71	0.427	n.a.	n.a.	n.a.	n.a.	0.00	0.00
58.891	22.080	0.644	7141.9	4403.1	8.407	3.478	3.10		Clay	52.8			20.87	0.82	n.a.	n.a.	0.71	0.427	n.a.	n.a.	n.a.	n.a.	0.00	0.00
59.055	20.170	0.534	7161.6	4412.6	7.519	3.220	3.12		Clay	53.8			19.06	0.82	n.a.	n.a.	0.71	0.427	n.a.	n.a.	n.a.	n.a.	0.00	0.00
59.219	17.300	0.423	7181.3	4422.0	6.200	3.085	3.18		Clay	56.5			16.35	0.82	n.a.	n.a.	0.71	0.426	n.a.	n.a.	n.a.	n.a.	0.00	0.00
59.383	15.690	0.361	7201.0	4431.5	5.456	2.987	3.22		Clay	58.4			14.83	0.82	n.a.	n.a.	0.71	0.426	n.a.	n.a.	n.a.	n.a.	0.00	0.00
59.547	15.470	0.325	7220.7	4440.9	5.341	2.742	3.20		Clay	57.8			14.62	0.82	n.a.	n.a.	0.71	0.425	n.a.	n.a.	n.a.	n.a.	0.00	0.00
59.711	16.170	0.312	7240.4	4450.4	5.640	2.484	3.16		Clay	55.9			15.28	0.82	n.a.	n.a.	0.70	0.425	n.a.	n.a.	n.a.	n.a.	0.00	0.00
59.875	15.750	0.298	7260.0	4459.8	5.435	2.459	3.17		Clay	56.4			14.89	0.82	n.a.	n.a.	0.70	0.425	n.a.	n.a.	n.a.	n.a.	0.00	0.00
60.039	15.420	0.280	7279.7	4469.3	5.272	2.379	3.18		Clay	56.6			14.57	0.82	n.a.	n.a.	0.70	0.424	n.a.	n.a.	n.a.	n.a.	0.00	0.00
60.203	14.570	0.293	7299.4	4478.7	4.877	2.678	3.23		Clay	59.2			13.77	0.82	n.a.	n.a.	0.70	0.424	n.a.	n.a.	n.a.	n.a.	0.00	0.00
60.367	15.310	0.290	7319.1	4488.2	5.192	2.490	3.19		Clay	57.3			14.47	0.82	n.a.	n.a.	0.70	0.424	n.a.	n.a.	n.a.	n.a.	0.00	0.00
60.531	15.560	0.284	7338.8	4497.6	5.288	2.389	3.18		Clay	56.6			14.71	0.82	n.a.	n.a.	0.70	0.423	n.a.	n.a.	n.a.	n.a.	0.00	0.00
60.696	15.780	0.422	7358.5	4507.1	5.370	3.484	3.26		Clay	60.4			14.91	0.82	n.a.	n.a.	0.70	0.423	n.a.	n.a.	n.a.	n.a.	0.00	0.00
60.860	19.700	0.767	7378.1	4516.5	7.090	4.787	3.24		Clay	59.3			18.62	0.82	n.a.	n.a.	0.70	0.422	n.a.	n.a.	n.a.	n.a.	0.00	0.00
61.024	40.430	1.193	7397.8	4526.0	16.231	3.247	2.85		Clay	42.5			38.21	0.82	n.a.	n.a.	0.70	0.422	n.a.	n.a.	n.a.	n.a.	0.00	0.00
61.188	42.290	1.553	7417.5	4535.4	17.013	4.025	2.89		Clay	44.1			39.97	0.82	n.a.	n.a.	0.70	0.422	n.a.	n.a.	n.a.	n.a.	0.00	0.00
61.352	26.830	0.765	7437.2	4544.9	10.170	3.310	3.02		Clay	49.4			25.36	0.82	n.a.	n.a.	0.70	0.421	n.a.	n.a.	n.a.	n.a.	0.00	0.00
61.516	18.220	0.424	7456.9	4554.3	6.364	2.923	3.15		Clay	55.5			17.22	0.82	n.a.	n.a.	0.70	0.421	n.a.	n.a.	n.a.	n.a.	0.00	0.00
61.680	15.680	0.303	7476.6	4563.8	5.233	2.540	3.20		Clay	57.4			14.82	0.82	n.a.	n.a.	0.69	0.420	n.a.	n.a.	n.a.	n.a.	0.00	0.00
61.844	15.160	0.226	7496.3	4573.2	4.991	1.979	3.16		Clay	55.7			14.33	0.82	n.a.									

Depth (ft)	q <sub>c</sub> (tsf)	f <sub>s</sub> (tsf)	σ <sub>vc</sub> (psf)	In situ σ'vc (psf)	Q	F (%)	lc	Layer "Plastic" PI > 7	Flag Soil Type	Fines (%)	Qc-N near interfaces (soft layer)	Thin Layer Factor (K <sub>tl</sub> )	Interpreted Qc-N	C <sub>N</sub>	q <sub>c1N</sub>	q <sub>c1N-CS</sub>	Stress Reduction Coeff. r <sub>d</sub>	CSR	K <sub>σ</sub> for Sand	CRR <sub>M=7.5</sub> σ'vc = 1 atm	CRR	Factor of Safety (CRR/CSR)	Vertical Strain ε <sub>v</sub>	Settlement (Inches)
63.156	18.820	0.400	7653.7	4648.8	6.450	2.666	3.13		Clay	54.3			17.79	0.81	n.a.	n.a.	0.69	0.417	n.a.	n.a.	n.a.	n.a.	0.00	0.00
63.320	19.110	0.407	7673.4	4658.2	6.558	2.667	3.12		Clay	54.1			18.06	0.81	n.a.	n.a.	0.69	0.417	n.a.	n.a.	n.a.	n.a.	0.00	0.00
63.484	18.950	0.384	7693.1	4667.7	6.471	2.542	3.12		Clay	53.8			17.91	0.81	n.a.	n.a.	0.69	0.416	n.a.	n.a.	n.a.	n.a.	0.00	0.00
63.648	18.250	0.433	7712.8	4677.1	6.155	3.010	3.17		Clay	56.4			17.25	0.81	n.a.	n.a.	0.68	0.416	n.a.	n.a.	n.a.	n.a.	0.00	0.00
63.812	20.440	0.466	7732.5	4686.6	7.073	2.813	3.11		Clay	53.4			19.32	0.81	n.a.	n.a.	0.68	0.415	n.a.	n.a.	n.a.	n.a.	0.00	0.00
63.976	20.110	0.600	7752.2	4696.0	6.914	3.696	3.18		Clay	56.7			19.01	0.81	n.a.	n.a.	0.68	0.415	n.a.	n.a.	n.a.	n.a.	0.00	0.00
64.140	21.680	0.713	7771.9	4705.5	7.563	4.008	3.17		Clay	56.1			20.49	0.81	n.a.	n.a.	0.68	0.415	n.a.	n.a.	n.a.	n.a.	0.00	0.00
64.304	22.190	0.852	7791.5	4714.9	7.760	4.658	3.20		Clay	57.5			20.97	0.81	n.a.	n.a.	0.68	0.414	n.a.	n.a.	n.a.	n.a.	0.00	0.00
64.469	22.960	0.945	7811.2	4724.4	8.066	4.958	3.20		Clay	57.6			21.70	0.81	n.a.	n.a.	0.68	0.414	n.a.	n.a.	n.a.	n.a.	0.00	0.00
64.633	23.300	0.932	7830.9	4733.8	8.190	4.809	3.19		Clay	57.0			22.02	0.81	n.a.	n.a.	0.68	0.414	n.a.	n.a.	n.a.	n.a.	0.00	0.00
64.797	22.710	0.866	7850.6	4743.3	7.921	4.612	3.19		Clay	57.0			21.47	0.81	n.a.	n.a.	0.68	0.413	n.a.	n.a.	n.a.	n.a.	0.00	0.00
64.961	20.740	0.744	7870.3	4752.7	7.072	4.426	3.22		Clay	58.4			19.60	0.81	n.a.	n.a.	0.68	0.413	n.a.	n.a.	n.a.	n.a.	0.00	0.00
65.125	20.510	0.711	7890.0	4762.2	6.957	4.295	3.22		Clay	58.3			19.39	0.81	n.a.	n.a.	0.68	0.412	n.a.	n.a.	n.a.	n.a.	0.00	0.00
65.289	20.990	0.695	7909.6	4771.6	7.140	4.077	3.19		Clay	57.3			19.84	0.81	n.a.	n.a.	0.68	0.412	n.a.	n.a.	n.a.	n.a.	0.00	0.00
65.453	20.630	0.638	7929.3	4781.1	6.971	3.827	3.19		Clay	57.0			19.50	0.81	n.a.	n.a.	0.68	0.412	n.a.	n.a.	n.a.	n.a.	0.00	0.00
65.617	18.590	0.597	7949.0	4790.5	6.102	4.085	3.25		Clay	60.0			17.57	0.81	n.a.	n.a.	0.68	0.411	n.a.	n.a.	n.a.	n.a.	0.00	0.00
65.781	18.220	0.541	7968.7	4800.0	5.932	3.798	3.24		Clay	59.6			17.22	0.81	n.a.	n.a.	0.67	0.411	n.a.	n.a.	n.a.	n.a.	0.00	0.00
65.945	17.680	0.584	7988.4	4809.4	5.691	4.268	3.29		Clay	61.7			16.71	0.81	n.a.	n.a.	0.67	0.411	n.a.	n.a.	n.a.	n.a.	0.00	0.00
66.109	17.560	0.550	8008.1	4818.9	5.626	4.059	3.28		Clay	61.3			16.60	0.80	n.a.	n.a.	0.67	0.410	n.a.	n.a.	n.a.	n.a.	0.00	0.00
66.273	17.400	0.510	8027.8	4828.3	5.545	3.811	3.27		Clay	60.8			16.45	0.80	n.a.	n.a.	0.67	0.410	n.a.	n.a.	n.a.	n.a.	0.00	0.00
66.437	16.660	0.514	8047.4	4837.8	5.224	4.070	3.30		Clay	62.6			15.75	0.80	n.a.	n.a.	0.67	0.409	n.a.	n.a.	n.a.	n.a.	0.00	0.00
66.601	18.090	0.560	8067.1	4847.2	5.800	3.987	3.26		Clay	60.6			17.10	0.80	n.a.	n.a.	0.67	0.409	n.a.	n.a.	n.a.	n.a.	0.00	0.00
66.765	18.740	0.595	8086.8	4856.7	6.052	4.046	3.25		Clay	60.0			17.71	0.80	n.a.	n.a.	0.67	0.409	n.a.	n.a.	n.a.	n.a.	0.00	0.00
66.929	18.310	0.600	8106.5	4866.1	5.860	4.210	3.27		Clay	61.0			17.31	0.80	n.a.	n.a.	0.67	0.408	n.a.	n.a.	n.a.	n.a.	0.00	0.00
67.093	18.190	0.637	8126.2	4875.6	5.795	4.508	3.29		Clay	62.0			17.19	0.80	n.a.	n.a.	0.67	0.408	n.a.	n.a.	n.a.	n.a.	0.00	0.00
67.257	18.160	0.643	8145.9	4885.0	5.767	4.562	3.30		Clay	62.3			17.16	0.80	n.a.	n.a.	0.67	0.408	n.a.	n.a.	n.a.	n.a.	0.00	0.00
67.421	17.850	0.658	8165.6	4894.5	5.626	4.776	3.32		Clay	63.3			16.87	0.80	n.a.	n.a.	0.67	0.407	n.a.	n.a.	n.a.	n.a.	0.00	0.00
67.585	17.550	0.672	8185.2	4903.9	5.488	4.997	3.34		Clay	64.3			16.59	0.80	n.a.	n.a.	0.67	0.407	n.a.	n.a.	n.a.	n.a.	0.00	0.00
67.749	17.550	0.652	8204.9	4913.4	5.474	4.847	3.33		Clay	63.9			16.59	0.80	n.a.	n.a.	0.66	0.406	n.a.	n.a.	n.a.	n.a.	0.00	0.00
67.913	16.930	0.611	8224.6	4922.8	5.207	4.769	3.34		Clay	64.6			16.00	0.80	n.a.	n.a.	0.66	0.406	n.a.	n.a.	n.a.	n.a.	0.00	0.00
68.077	17.180	0.603	8244.3	4932.3	5.295	4.616	3.33		Clay	63.9			16.24	0.80	n.a.	n.a.	0.66	0.406	n.a.	n.a.	n.a.	n.a.	0.00	0.00
68.241	18.350	0.621	8264.0	4941.7	5.754	4.370	3.29		Clay	61.8			17.34	0.80	n.a.	n.a.	0.66	0.405	n.a.	n.a.	n.a.	n.a.	0.00	0.00
68.406	20.210	0.635	8283.7	4951.2	6.491	3.954	3.22		Clay	58.5			19.10	0.80	n.a.	n.a.	0.66	0.405	n.a.	n.a.	n.a.	n.a.	0.00	0.00
68.570	22.690	0.630	8303.3	4960.6	7.474	3.401	3.13		Clay	54.5			21.45	0.80	n.a.	n.a.	0.66	0.405	n.a.	n.a.	n.a.	n.a.	0.00	0.00
68.734	24.490	0.680	8323.0	4970.1	8.180	3.347	3.10		Clay	52.9			23.15	0.80	n.a.	n.a.	0.66	0.404	n.a.	n.a.	n.a.	n.a.	0.00	0.00
68.898	26.430	0.686	8342.7	4979.5	8.940	3.083	3.04		Clay	50.6			24.98	0.80	n.a.	n.a.	0.66	0.404	n.a.	n.a.	n.a.	n.a.	0.00	0.00
69.062	26.260	0.592	8362.4	4989.0	8.851	2.682	3.01		Clay	49.3			24.82	0.80	n.a.	n.a.	0.66	0.403	n.a.	n.a.	n.a.	n.a.	0.00	0.00
69.226	23.720	0.509	8382.1	4998.4	7.814	2.607	3.05		Clay	51.0			22.42	0.80	n.a.	n.a.	0.66	0.403	n.a.	n.a.	n.a.	n.a.	0.00	0.00
69.390	21.690	0.489	8401.8	5007.9	6.985	2.794	3.11		Clay	53.5			20.50	0.80	n.a.	n.a.	0.66	0.403	n.a.	n.a.	n.a.	n.a.	0.00	0.00
69.554	20.650	0.549	8421.5	5017.3	6.553	3.341	3.18		Clay	56.5			19.52	0.80	n.a.	n.a.	0.66	0.402	n.a.	n.a.	n.a.	n.a.	0.00	0.00
69.718	23.150	0.531	8441.1	5026.7	7.531	2.807	3.08		Clay	52.3			21.88	0.80	n.a.	n.a.	0.66	0.402	n.a.	n.a.	n.a.	n.a.	0.00	0.00
69.882	24.020	0.482	8460.8	5036.2	7.859	2.435	3.03		Clay	50.2			22.70	0.80	n.a.	n.a.	0.66	0.402	n.a.	n.a.	n.a.	n.a.	0.00	0.00
70.046	26.050	0.730	8480.5	5045.6	8.645	3.346	3.08		Clay	52.0			24.62	0.80	n.a.	n.a.	0.65	0.401	n.a.	n.a.	n.a.	n.a.	0.00	0.00
70.210	29.340	0.929	8500.2	5055.1	9.927	3.703	3.05		Clay	50.9			27.73	0.79	n.a.	n.a.	0.65	0.401	n.a.	n.a.	n.a.	n.a.	0.00	0.00
70.374	36.580	0.771	8519.9	5064.5	12.763	2.386	2.85		Clay	42.8			34.57	0.79	n.a.	n.a.	0.65	0.401	n.a.	n.a.	n.a.	n.a.	0.00	0.00
70.538	38.250	0.747	8539.6	5074.0	13.394	2.198	2.82		Clay	41.3			36.15	0.79	n.a.	n.a.	0.65	0.400	n.a.	n.a.	n.a.	n.a.	0.00	0.00
70.702	34.290	0.916	8559.3	5083.4	11.807	3.053	2.94		Clay	46.3			32.41	0.79	n.a.	n.a.	0.65	0.400	n.a.	n.a.	n.a.	n.a.	0.00	0.00
70.866	41.290	0.985	8579.9	5092.9	14.530	2.663	2.83		Clay	42.0			39.03	0.79	n.a.	n.a.	0.65	0.399	n.a.	n.a.	n.a.	n.a.	0.00	0.00
71.030	49.300	1.075	8598.6	5102.3	17.639	2.388	2.74		Clay	38.4			46.60	0.79	n.a.	n.a.	0.65	0.399	n.a.	n.a.	n.a.	n.a.	0.00	0.00
71.194	62.100	1.041	8618.3	5111.8	35.143	1.802	2.42		Sand	28.0		1.8	105.65	0.67	70.95	122.79	0.65	0.399	0.888	0.186	0.193	0.48	0.03	0.00
71.358	49.670	1.693	8638.0	5121.2	17.711	3.732	2.85		Clay	42.8			46.95	0.79	n.a.	n.a.	0.65	0.398	n.a.	n.a.	n.a.	n.a.	0.00	0.00
71.522	63.350	2.566	8657.7	5130.7	23.007	4.348	2.81		Clay	41.1			59.88	0.79	n.a.	n.a.	0.65	0.398	n.a.	n.a.	n.a.	n.a.	0.00	0.00
71.686	143.430	2.869	8677.4	5140.1	84.350	2.062	2.18		Sand	21.2	367.64		367.64	0.79	290.89	400.67	0.65	0.398	0.734	2.000	1.719	4.32	0.00	0.00
71.850	264.710	2.522	8697.0	5149.6	157.748	0.969	1.75		Sand	12.0	367.64		367.64	0.79	290.75	340.13	0.65	0.397	0.733	2.000	1.718	4.32	0.00	0.00
72.014	304.600	2.991	8716.7	5159.0	181.744	0.996	1.72		Sand	11.4	367.64		367.64	0.79	290.61	333.26	0.65	0.397	0.733	2.000	1.716	4.32	0.00	0.00
72.178	363.020	2.040	8736.4	5168.5	216.902	0.569	1.50		Sand	8.0	367.64		367.64	0.79	290.47	298.92	0.65	0.397	0.732	2.000	1.715	4.32		



CPT No. 3

PGA ( $A_{max}$ ) 0.50

Total Settlement: 0.00 (Inches)

Depth (ft)	$q_c$ (tsf)	$f_s$ (tsf)	$\sigma_{vc}$ (psf)	Insitu $\sigma'_{vc}$ (psf)	Q	F (%)	$I_c$	Layer "Plastic" PI > 7	Flag Soil Type	Fines (%)	$q_c$ near interfaces (soft layer)	Thin Layer Factor ( $K_{li}$ )	Interpreted $q_c$	$C_N$	$q_{c1N}$	$q_{c1N-CS}$	Stress Reduction Coeff, $r_d$	CSR	$K_\sigma$ for Sand	$CRR_{M=7.5, \sigma'_{vc} = 1 \text{ atm}}$	CRR	Factor of Safety (CRR/CSR)	Vertical Strain $\epsilon_v$	Settlement (Inches)
73.655	87.230	3.077	8913.6	5253.5	31.512	3.717	2.66		Clay	35.7			82.45	0.79	n.a.	n.a.	0.64	0.393	n.a.	n.a.	n.a.	n.a.	0.00	0.00
73.819	157.890	2.267	8933.3	5263.0	91.949	1.477	2.05		Sand	18.1			149.23	0.70	103.74	152.59	0.64	0.393	0.851	0.284	0.283	0.72	0.02	0.00
73.983	278.830	2.243	8953.0	5272.4	164.277	0.818	1.69		Sand	11.0			263.54	0.77	202.13	230.84	0.64	0.393	0.726	2.000	1.701	4.33	0.00	0.00
74.147	328.590	2.038	8972.6	5281.9	193.893	0.629	1.56		Sand	8.9			310.58	0.79	243.98	258.07	0.64	0.392	0.726	2.000	1.700	4.33	0.00	0.00
74.311	335.530	2.351	8992.3	5291.3	197.862	0.710	1.59		Sand	9.3			317.14	0.79	249.02	266.99	0.64	0.392	0.725	2.000	1.699	4.33	0.00	0.00
74.475	322.970	2.666	9012.0	5300.8	190.179	0.837	1.65		Sand	10.3			305.26	0.78	239.58	265.82	0.64	0.392	0.725	2.000	1.697	4.33	0.00	0.00
74.639	300.820	2.711	9031.7	5310.2	176.788	0.915	1.70		Sand	11.1			284.33	0.78	223.05	255.37	0.63	0.391	0.724	2.000	1.696	4.33	0.00	0.00
74.803	280.320	2.525	9051.4	5319.7	164.405	0.916	1.72		Sand	11.5			264.95	0.77	204.27	237.97	0.63	0.391	0.723	2.000	1.695	4.33	0.00	0.00
74.967	265.820	2.163	9071.1	5329.1	155.617	0.828	1.71		Sand	11.3			251.25	0.76	189.81	220.19	0.63	0.391	0.723	2.000	1.694	4.34	0.00	0.00
75.131	240.550	1.875	9090.7	5338.6	140.437	0.794	1.73		Sand	11.7			227.36	0.74	167.15	197.81	0.63	0.390	0.763	1.031	0.922	2.36	0.00	0.00

Depth (ft)	$q_c$ (tsf)	$f_s$ (tsf)	$\sigma_{vc}$ (psf)	In situ $\sigma'_{vc}$ (psf)	Q	F (%)	$l_c$	Layer "Plastic" PI > 7	Flag Soil Type	Fines (%)	$q_c$ -N near interfaces (soft layer)	Thin Layer Factor ( $K_{t1}$ )	Interpreted $q_c$ -N	$C_N$	$q_{c1N}$	$q_{c1N-CS}$	Stress Reduction Coeff. $r_d$	CSR	$K_{cs}$ for Sand	$CRR_{M=7.5}$ $r'_{vc} = 1 \text{ atm}$	CRR	Factor of Safety (CRR/CSR)	Vertical Strain $\epsilon_v$	Settlement (Inches)
0.164	21.030	0.670	20.5	20.5	201.821	3.186	2.08		Unsaturated	18.8			19.88	1.70	33.79	65.78	1.00	0.325	1.100	n.a.	n.a.	n.a.	0.00	0.00
0.328	214.170	1.323	41.0	41.0	1453.924	0.618	1.06		Unsaturated	3.2			202.43	1.70	344.13	344.13	1.00	0.325	1.100	n.a.	n.a.	n.a.	0.00	0.00
0.492	241.470	1.378	61.5	61.5	1338.403	0.571	1.03		Unsaturated	3.1			228.23	1.70	388.00	388.00	1.00	0.325	1.100	n.a.	n.a.	n.a.	0.00	0.00
0.656	171.360	1.304	82.0	82.0	822.461	0.761	1.23		Unsaturated	4.8			161.97	1.70	275.34	275.37	1.00	0.325	1.100	n.a.	n.a.	n.a.	0.00	0.00
0.820	157.510	1.315	102.5	102.5	676.116	0.835	1.31		Unsaturated	5.6			148.88	1.70	253.09	253.35	1.00	0.325	1.100	n.a.	n.a.	n.a.	0.00	0.00
0.984	169.370	1.255	123.0	123.0	663.656	0.741	1.27		Unsaturated	5.2			160.09	1.70	272.14	272.23	1.00	0.325	1.100	n.a.	n.a.	n.a.	0.00	0.00
1.148	152.680	1.222	143.5	143.5	553.820	0.800	1.34		Unsaturated	6.0			144.31	1.70	245.33	245.87	1.00	0.325	1.100	n.a.	n.a.	n.a.	0.00	0.00
1.312	106.620	1.981	164.0	164.0	361.659	1.859	1.75		Unsaturated	11.9			100.78	1.70	171.32	204.19	1.00	0.325	1.100	n.a.	n.a.	n.a.	0.00	0.00
1.476	61.390	1.979	184.5	184.5	196.184	3.228	2.09		Unsaturated	19.1			58.02	1.70	98.64	148.52	1.00	0.325	1.100	n.a.	n.a.	n.a.	0.00	0.00
1.640	31.380	1.850	205.1	205.1	94.967	5.914	2.49		Unsaturated	30.0			29.66	1.70	50.42	96.28	1.00	0.325	1.100	n.a.	n.a.	n.a.	0.00	0.00
1.804	26.450	1.513	225.6	225.6	76.245	5.744	2.54		Unsaturated	31.5			25.00	1.70	42.50	86.15	1.00	0.325	1.100	n.a.	n.a.	n.a.	0.00	0.00
1.969	23.870	1.424	246.1	246.1	65.820	5.998	2.59		Unsaturated	33.3			22.56	1.70	38.35	81.00	1.00	0.325	1.100	n.a.	n.a.	n.a.	0.00	0.00
2.133	18.440	1.230	266.6	266.6	73.777	6.719	2.60		Unsaturated	33.6			17.43	1.70	29.63	69.34	1.00	0.325	1.100	n.a.	n.a.	n.a.	0.00	0.00
2.297	14.320	1.022	287.1	287.1	54.244	7.209	2.71		Unsaturated	37.3			13.53	1.70	23.01	60.93	1.00	0.325	1.100	n.a.	n.a.	n.a.	0.00	0.00
2.461	12.430	0.867	307.6	307.6	44.758	7.062	2.75		Unsaturated	39.0			11.75	1.70	19.97	56.98	1.00	0.325	1.100	n.a.	n.a.	n.a.	0.00	0.00
2.625	10.940	0.832	328.1	328.1	65.690	7.722	2.68		Unsaturated	36.3			10.34	1.70	17.58	53.51	1.00	0.325	1.100	n.a.	n.a.	n.a.	0.00	0.00
2.789	10.000	0.786	348.6	348.6	56.374	7.998	2.73		Unsaturated	38.2			9.45	1.70	16.07	51.65	1.00	0.325	1.100	n.a.	n.a.	n.a.	0.00	0.00
2.953	9.250	0.769	369.1	369.1	49.123	8.484	2.79		Unsaturated	40.3			8.74	1.70	14.86	50.17	1.00	0.324	1.100	n.a.	n.a.	n.a.	0.00	0.00
3.117	9.320	0.696	389.6	389.6	46.844	7.624	2.77		Unsaturated	39.5			8.81	1.70	14.98	50.27	1.00	0.324	1.100	n.a.	n.a.	n.a.	0.00	0.00
3.281	11.130	0.536	410.1	410.1	32.566	4.903	2.74		Unsaturated	38.3			10.52	1.70	17.88	54.11	1.00	0.324	1.100	n.a.	n.a.	n.a.	0.00	0.00
3.445	15.770	0.360	430.6	430.6	32.591	2.315	2.52		Unsaturated	30.9			14.91	1.70	25.34	63.03	1.00	0.324	1.100	n.a.	n.a.	n.a.	0.00	0.00
3.609	18.660	0.281	451.1	451.1	37.736	1.522	2.36		Unsaturated	26.0			17.64	1.70	29.98	67.42	1.00	0.324	1.100	n.a.	n.a.	n.a.	0.00	0.00
3.773	20.190	0.246	471.6	471.6	39.949	1.232	2.28		Unsaturated	23.9			19.88	1.70	32.44	69.42	1.00	0.324	1.100	n.a.	n.a.	n.a.	0.00	0.00
3.937	20.720	0.230	492.1	492.1	40.127	1.123	2.26		Unsaturated	23.3			19.58	1.70	33.29	70.05	0.99	0.323	1.100	n.a.	n.a.	n.a.	0.00	0.00
4.101	20.910	0.261	512.6	512.6	39.661	1.261	2.29		Unsaturated	24.2			19.76	1.70	33.60	71.10	0.99	0.323	1.100	n.a.	n.a.	n.a.	0.00	0.00
4.265	21.930	0.286	533.1	533.1	40.792	1.321	2.29		Unsaturated	24.2			20.73	1.70	35.24	73.28	0.99	0.323	1.100	n.a.	n.a.	n.a.	0.00	0.00
4.429	21.480	0.441	553.6	553.6	39.179	2.079	2.43		Unsaturated	28.1			20.30	1.70	34.51	74.37	0.99	0.323	1.100	n.a.	n.a.	n.a.	0.00	0.00
4.593	15.800	0.658	574.1	574.1	36.539	4.239	2.66		Unsaturated	35.5			14.93	1.70	25.39	63.92	0.99	0.323	1.100	n.a.	n.a.	n.a.	0.00	0.00
4.757	12.670	0.929	594.7	594.7	41.613	7.508	2.80		Unsaturated	40.6			11.98	1.70	20.36	57.60	0.99	0.322	1.096	n.a.	n.a.	n.a.	0.00	0.00
4.921	20.140	1.158	615.2	615.2	44.510	5.840	2.70		Unsaturated	36.9			19.04	1.70	32.36	73.47	0.99	0.322	1.100	n.a.	n.a.	n.a.	0.00	0.00
5.085	23.870	1.331	635.7	635.7	51.659	5.653	2.64		Unsaturated	35.0			22.56	1.70	38.35	81.29	0.99	0.322	1.100	n.a.	n.a.	n.a.	0.00	0.00
5.249	23.980	1.432	656.2	656.2	50.738	6.054	2.67		Unsaturated	35.9			22.67	1.70	38.53	81.66	0.99	0.322	1.100	n.a.	n.a.	n.a.	0.00	0.00
5.413	22.510	1.368	676.7	676.7	65.531	6.168	2.60		Unsaturated	33.7			21.28	1.70	36.17	78.13	0.99	0.322	1.100	n.a.	n.a.	n.a.	0.00	0.00
5.577	23.070	1.323	697.2	697.2	46.716	5.821	2.68		Unsaturated	36.3			21.81	1.70	37.07	79.75	0.99	0.321	1.100	n.a.	n.a.	n.a.	0.00	0.00
5.741	21.080	1.114	717.7	717.7	41.748	5.375	2.69		Unsaturated	36.6			19.92	1.70	33.87	75.48	0.99	0.321	1.095	n.a.	n.a.	n.a.	0.00	0.00
5.906	22.160	1.021	738.2	738.2	43.046	4.685	2.64		Unsaturated	34.8			20.95	1.70	35.61	77.57	0.99	0.321	1.094	n.a.	n.a.	n.a.	0.00	0.00
6.070	31.710	1.117	758.7	758.7	49.455	3.565	2.51		Unsaturated	30.6			29.97	1.68	50.37	96.42	0.99	0.321	1.100	n.a.	n.a.	n.a.	0.00	0.00
6.234	30.440	1.342	779.2	779.2	46.806	4.467	2.60		Unsaturated	33.4			28.77	1.67	47.98	93.94	0.99	0.321	1.100	n.a.	n.a.	n.a.	0.00	0.00
6.398	22.940	1.344	799.7	799.7	56.371	5.964	2.63		Unsaturated	34.7			21.68	1.70	36.86	79.24	0.99	0.321	1.088	n.a.	n.a.	n.a.	0.00	0.00
6.562	16.940	1.260	820.2	820.2	40.306	7.621	2.81		Clay	41.1			16.01	1.28	n.a.	n.a.	0.99	0.322	n.a.	n.a.	n.a.	n.a.	0.00	0.00
6.726	16.930	1.194	840.7	840.7	39.275	7.229	2.80		Clay	40.7			16.00	1.28	n.a.	n.a.	0.99	0.326	n.a.	n.a.	n.a.	n.a.	0.00	0.00
6.890	17.030	1.224	861.2	861.2	38.549	7.372	2.81		Clay	41.2			16.10	1.27	n.a.	n.a.	0.98	0.329	n.a.	n.a.	n.a.	n.a.	0.00	0.00
7.054	15.530	1.145	881.7	881.7	34.226	7.585	2.86		Clay	42.9			14.68	1.26	n.a.	n.a.	0.98	0.333	n.a.	n.a.	n.a.	n.a.	0.00	0.00
7.218	16.080	1.163	902.2	902.2	34.645	7.440	2.85		Clay	42.5			15.20	1.25	n.a.	n.a.	0.98	0.336	n.a.	n.a.	n.a.	n.a.	0.00	0.00
7.382	17.080	1.152	922.7	922.7	36.020	6.930	2.81		Clay	41.2			16.14	1.24	n.a.	n.a.	0.98	0.340	n.a.	n.a.	n.a.	n.a.	0.00	0.00
7.546	15.110	1.176	943.2	943.2	31.038	8.032	2.90		Clay	44.7			14.28	1.24	n.a.	n.a.	0.98	0.343	n.a.	n.a.	n.a.	n.a.	0.00	0.00
7.710	14.040	1.067	963.7	963.7	28.136	7.866	2.93		Clay	45.6			13.27	1.23	n.a.	n.a.	0.98	0.346	n.a.	n.a.	n.a.	n.a.	0.00	0.00
7.874	15.680	1.097	984.3	984.3	30.862	7.221	2.87		Clay	43.5			14.82	1.22	n.a.	n.a.	0.98	0.349	n.a.	n.a.	n.a.	n.a.	0.00	0.00
8.038	18.480	1.288	1004.8	1004.8	35.785	7.162	2.82		Clay	41.6			17.47	1.22	n.a.	n.a.	0.98	0.352	n.a.	n.a.	n.a.	n.a.	0.00	0.00
8.202	24.460	1.305	1025.3	1025.3	46.715	5.448	2.66		Clay	35.6			23.12	1.21	n.a.	n.a.	0.98	0.355	n.a.	n.a.	n.a.	n.a.	0.00	0.00
8.366	16.460	1.362	1045.8	1045.8	30.479	8.547	2.93		Clay	45.7			15.56	1.20	n.a.	n.a.	0.98	0.358	n.a.	n.a.	n.a.	n.a.	0.00	0.00
8.530	15.650	1.021	1066.3	1066.3	28.355	6.753	2.88		Clay	43.6			14.79	1.20	n.a.	n.a.	0.98	0.361	n.a.	n.a.	n.a.	n.a.	0.00	0.00
8.694	13.870	1.017	1086.8	1086.8	24.525	7.632	2.96		Clay	47.0			13.11	1.19	n.a.	n.a.	0.98	0.364	n.a.	n.a.	n.a.	n.a.	0.00	0.00
8.858	14.230	0.968	1107.3	1107.3	24.703	7.074	2.93		Clay	45.9			13.45	1.19	n.a.	n.a.	0.98	0.367	n.a.	n.a.	n.a.	n.a.	0.00	0.00
9.022	14.640	0.981	1127.8	1127.8	24.962	6.971	2.92		Clay	45.6			13.84	1.18	n.a.	n.a								

Depth (ft)	$q_c$ (tsf)	$f_s$ (tsf)	$\sigma_{vc}$ (psf)	In situ $\sigma'_{vc}$ (psf)	Q	F (%)	lc	Layer "Plastic" PI > 7	Flag Soil Type	Fines (%)	$q_c$ -N near interfaces (soft layer)	Thin Layer Factor ( $K_{t1}$ )	Interpreted $q_c$ -N	C <sub>N</sub>	$q_c$ -1N	$q_c$ -1N-CS	Stress Reduction Coeff. $r_d$	CSR	$K_{\sigma}$ for Sand	CRR <sub>M=7.5</sub> $r'_{vc} = 1 \text{ atm}$	CRR	Factor of Safety (CRR/CSR)	Vertical Strain $\epsilon_v$	Settlement (Inches)
10.663	14.650	1.070	1332.8	1332.8	20.983	7.650	3.01		Clay	49.0			13.85	1.13	n.a.	n.a.	0.97	0.393	n.a.	n.a.	n.a.	n.a.	0.00	0.00
10.827	19.640	1.187	1353.3	1353.3	28.024	6.262	2.86		Clay	42.9			18.56	1.13	n.a.	n.a.	0.97	0.395	n.a.	n.a.	n.a.	n.a.	0.00	0.00
10.991	20.340	1.116	1373.9	1373.9	28.610	5.680	2.82		Clay	41.5			19.22	1.12	n.a.	n.a.	0.97	0.397	n.a.	n.a.	n.a.	n.a.	0.00	0.00
11.155	17.150	1.075	1394.4	1394.4	23.599	6.531	2.92		Clay	45.5			16.21	1.12	n.a.	n.a.	0.97	0.399	n.a.	n.a.	n.a.	n.a.	0.00	0.00
11.319	18.100	1.115	1414.9	1414.9	24.586	6.412	2.90		Clay	44.8			17.11	1.11	n.a.	n.a.	0.97	0.401	n.a.	n.a.	n.a.	n.a.	0.00	0.00
11.483	18.190	1.317	1435.4	1435.4	24.345	7.539	2.96		Clay	46.9			17.19	1.11	n.a.	n.a.	0.97	0.403	n.a.	n.a.	n.a.	n.a.	0.00	0.00
11.647	21.420	1.351	1455.9	1455.9	28.426	6.527	2.86		Clay	43.2			20.25	1.10	n.a.	n.a.	0.97	0.405	n.a.	n.a.	n.a.	n.a.	0.00	0.00
11.811	24.850	1.122	1476.4	1476.4	32.663	4.653	2.72		Clay	37.7			23.49	1.10	n.a.	n.a.	0.96	0.406	n.a.	n.a.	n.a.	n.a.	0.00	0.00
11.975	20.250	0.919	1496.9	1496.9	26.056	4.713	2.79		Clay	40.5			19.14	1.10	n.a.	n.a.	0.96	0.408	n.a.	n.a.	n.a.	n.a.	0.00	0.00
12.139	13.160	0.797	1517.4	1517.4	16.346	6.424	3.03		Clay	50.2			12.44	1.09	n.a.	n.a.	0.96	0.410	n.a.	n.a.	n.a.	n.a.	0.00	0.00
12.303	12.330	0.760	1537.9	1537.9	15.035	6.570	3.07		Clay	51.6			11.65	1.09	n.a.	n.a.	0.96	0.412	n.a.	n.a.	n.a.	n.a.	0.00	0.00
12.467	11.930	0.815	1558.4	1558.4	14.311	7.304	3.11		Clay	53.7			11.28	1.08	n.a.	n.a.	0.96	0.413	n.a.	n.a.	n.a.	n.a.	0.00	0.00
12.631	12.180	0.901	1578.9	1578.9	14.428	7.912	3.13		Clay	54.6			11.51	1.08	n.a.	n.a.	0.96	0.415	n.a.	n.a.	n.a.	n.a.	0.00	0.00
12.795	12.570	0.936	1599.4	1599.4	14.718	7.951	3.13		Clay	54.4			11.88	1.08	n.a.	n.a.	0.96	0.416	n.a.	n.a.	n.a.	n.a.	0.00	0.00
12.959	12.540	0.981	1619.9	1619.9	14.482	8.365	3.15		Clay	55.3			11.85	1.07	n.a.	n.a.	0.96	0.418	n.a.	n.a.	n.a.	n.a.	0.00	0.00
13.123	12.350	0.952	1640.4	1640.4	14.057	8.260	3.16		Clay	55.6			11.67	1.07	n.a.	n.a.	0.96	0.419	n.a.	n.a.	n.a.	n.a.	0.00	0.00
13.287	11.680	0.936	1660.9	1660.9	13.064	8.629	3.19		Clay	57.2			11.04	1.07	n.a.	n.a.	0.96	0.421	n.a.	n.a.	n.a.	n.a.	0.00	0.00
13.451	11.190	0.897	1681.4	1681.4	12.310	8.667	3.21		Clay	58.2			10.58	1.06	n.a.	n.a.	0.96	0.422	n.a.	n.a.	n.a.	n.a.	0.00	0.00
13.615	10.480	0.844	1701.9	1701.9	11.315	8.769	3.24		Clay	59.7			9.91	1.06	n.a.	n.a.	0.96	0.424	n.a.	n.a.	n.a.	n.a.	0.00	0.00
13.780	10.370	0.807	1722.4	1722.4	11.041	8.487	3.24		Clay	59.6			9.80	1.06	n.a.	n.a.	0.96	0.425	n.a.	n.a.	n.a.	n.a.	0.00	0.00
13.944	9.450	0.797	1742.9	1742.9	9.844	9.293	3.30		Clay	62.7			8.93	1.05	n.a.	n.a.	0.96	0.427	n.a.	n.a.	n.a.	n.a.	0.00	0.00
14.108	8.630	0.731	1763.5	1763.5	8.788	9.429	3.35		Clay	64.7			8.16	1.05	n.a.	n.a.	0.95	0.428	n.a.	n.a.	n.a.	n.a.	0.00	0.00
14.272	8.270	0.707	1784.0	1784.0	8.272	9.588	3.37		Clay	67.0			7.82	1.05	n.a.	n.a.	0.95	0.429	n.a.	n.a.	n.a.	n.a.	0.00	0.00
14.436	8.180	0.690	1804.5	1804.5	8.066	9.485	3.38		Clay	66.2			7.73	1.04	n.a.	n.a.	0.95	0.430	n.a.	n.a.	n.a.	n.a.	0.00	0.00
14.600	8.380	0.701	1825.0	1825.0	8.184	9.391	3.37		Clay	65.8			7.92	1.04	n.a.	n.a.	0.95	0.432	n.a.	n.a.	n.a.	n.a.	0.00	0.00
14.764	8.290	0.668	1845.5	1845.5	7.984	9.071	3.37		Clay	65.8			7.84	1.04	n.a.	n.a.	0.95	0.433	n.a.	n.a.	n.a.	n.a.	0.00	0.00
14.928	7.930	0.665	1866.0	1866.0	7.500	9.510	3.40		Clay	67.5			7.50	1.03	n.a.	n.a.	0.95	0.434	n.a.	n.a.	n.a.	n.a.	0.00	0.00
15.092	8.310	0.622	1886.0	1880.3	7.836	8.440	3.35		Clay	65.1			7.85	1.03	n.a.	n.a.	0.95	0.435	n.a.	n.a.	n.a.	n.a.	0.00	0.00
15.256	8.720	0.737	1905.7	1889.7	8.220	9.494	3.37		Clay	65.9			8.24	1.03	n.a.	n.a.	0.95	0.436	n.a.	n.a.	n.a.	n.a.	0.00	0.00
15.420	8.420	0.731	1925.4	1899.2	7.853	9.806	3.39		Clay	67.2			7.96	1.03	n.a.	n.a.	0.95	0.438	n.a.	n.a.	n.a.	n.a.	0.00	0.00
15.584	9.410	0.678	1945.1	1908.6	8.841	8.037	3.30		Clay	62.4			8.89	1.03	n.a.	n.a.	0.95	0.439	n.a.	n.a.	n.a.	n.a.	0.00	0.00
15.748	8.910	0.629	1964.8	1918.1	8.266	7.939	3.32		Clay	63.3			8.42	1.03	n.a.	n.a.	0.95	0.440	n.a.	n.a.	n.a.	n.a.	0.00	0.00
15.912	8.080	0.646	1984.4	1927.5	7.354	9.117	3.40		Clay	67.2			7.64	1.02	n.a.	n.a.	0.95	0.441	n.a.	n.a.	n.a.	n.a.	0.00	0.00
16.076	7.980	0.608	2004.1	1937.0	7.205	8.719	3.39		Clay	66.9			7.54	1.02	n.a.	n.a.	0.95	0.442	n.a.	n.a.	n.a.	n.a.	0.00	0.00
16.240	8.400	0.586	2023.8	1946.4	7.591	7.936	3.35		Clay	64.7			7.94	1.02	n.a.	n.a.	0.94	0.443	n.a.	n.a.	n.a.	n.a.	0.00	0.00
16.404	8.990	0.626	2043.5	1955.9	8.148	7.860	3.32		Clay	63.4			8.50	1.02	n.a.	n.a.	0.94	0.444	n.a.	n.a.	n.a.	n.a.	0.00	0.00
16.568	8.940	0.678	2063.2	1965.3	8.048	8.576	3.35		Clay	64.8			8.45	1.02	n.a.	n.a.	0.94	0.445	n.a.	n.a.	n.a.	n.a.	0.00	0.00
16.732	8.040	0.636	2082.9	1974.8	7.088	9.085	3.41		Clay	67.8			7.60	1.02	n.a.	n.a.	0.94	0.446	n.a.	n.a.	n.a.	n.a.	0.00	0.00
16.896	7.680	0.577	2102.6	1984.2	6.681	8.706	3.41		Clay	68.2			7.26	1.02	n.a.	n.a.	0.94	0.447	n.a.	n.a.	n.a.	n.a.	0.00	0.00
17.060	7.480	0.540	2122.2	1993.7	6.439	8.414	3.42		Clay	68.4			7.07	1.02	n.a.	n.a.	0.94	0.447	n.a.	n.a.	n.a.	n.a.	0.00	0.00
17.224	7.210	0.503	2141.9	2003.1	6.129	8.185	3.43		Clay	68.9			6.81	1.01	n.a.	n.a.	0.94	0.448	n.a.	n.a.	n.a.	n.a.	0.00	0.00
17.388	7.050	0.477	2161.6	2012.6	5.932	7.989	3.43		Clay	69.1			6.66	1.01	n.a.	n.a.	0.94	0.449	n.a.	n.a.	n.a.	n.a.	0.00	0.00
17.552	8.020	0.535	2181.3	2022.0	6.854	7.725	3.37		Clay	66.1			7.58	1.01	n.a.	n.a.	0.94	0.450	n.a.	n.a.	n.a.	n.a.	0.00	0.00
17.717	9.590	0.632	2201.0	2031.5	8.358	7.447	3.30		Clay	62.3			9.06	1.01	n.a.	n.a.	0.94	0.451	n.a.	n.a.	n.a.	n.a.	0.00	0.00
17.881	10.870	0.763	2220.7	2040.9	9.564	7.817	3.27		Clay	60.7			10.27	1.01	n.a.	n.a.	0.94	0.452	n.a.	n.a.	n.a.	n.a.	0.00	0.00
18.045	10.860	0.766	2240.4	2050.4	9.501	7.861	3.27		Clay	60.9			10.26	1.01	n.a.	n.a.	0.94	0.452	n.a.	n.a.	n.a.	n.a.	0.00	0.00
18.209	11.000	0.741	2260.0	2059.8	9.583	7.510	3.25		Clay	60.1			10.40	1.01	n.a.	n.a.	0.93	0.453	n.a.	n.a.	n.a.	n.a.	0.00	0.00
18.373	11.220	0.952	2279.7	2069.3	9.743	9.448	3.31		Clay	63.1			10.60	1.01	n.a.	n.a.	0.93	0.454	n.a.	n.a.	n.a.	n.a.	0.00	0.00
18.537	13.060	1.000	2299.4	2078.7	11.459	8.395	3.23		Clay	58.9			12.34	1.00	n.a.	n.a.	0.93	0.455	n.a.	n.a.	n.a.	n.a.	0.00	0.00
18.701	20.070	0.839	2319.1	2088.2	18.112	4.436	2.89		Clay	44.4			18.97	1.00	n.a.	n.a.	0.93	0.455	n.a.	n.a.	n.a.	n.a.	0.00	0.00
18.865	15.590	0.694	2338.8	2097.6	13.750	4.815	3.01		Clay	49.1			14.74	1.00	n.a.	n.a.	0.93	0.456	n.a.	n.a.	n.a.	n.a.	0.00	0.00
19.029	11.060	0.618	2358.5	2107.1	9.379	6.255	3.21		Clay	58.1			10.45	1.00	n.a.	n.a.	0.93	0.457	n.a.	n.a.	n.a.	n.a.	0.00	0.00
19.193	10.440	0.701	2378.1	2116.5	8.742	7.578	3.29		Clay	61.8			9.87	1.00	n.a.	n.a.	0.93	0.457	n.a.	n.a.	n.a.	n.a.	0.00	0.00
19.357	11.560	0.753	2397.8	2126.0	9.747	7.270	3.24		Clay	59.4			10.93	1.00	n.a.	n.a.	0.93	0.458	n.a.	n.a.	n.a.	n.a.	0.00	0.00
19.521	12.420	0.803	2417.5	2135.4	10.500	7.165	3.21		Clay	58.1			11.74	1.00	n.a.	n.a.	0.93	0.459	n.a.	n.a.	n.a.	n.a.	0.00	0.00
19.685	14.210	0.830	2437.2	2144.9	12.114	6.391	3.13		Clay	54.4			13.43	1.00	n.a.	n.a.	0.93	0.459	n.a.	n.a.	n.a.	n.a.	0.00	0.00
19.849	18.640	0.764	2456.9	2154.3	16.164	4.386	2.93		Clay	45.8			17.62	1.00	n.a.	n.a.	0.							

Depth (ft)	q <sub>c</sub> (tsf)	f <sub>s</sub> (tsf)	σ <sub>vc</sub> (psf)	In situ σ <sub>vc</sub> (psf)	Q	F (%)	lc	Layer "Plastic" PI > 7	Flag Soil Type	Fines (%)	q <sub>c-N</sub> near interfaces (soft layer)	Thin Layer Factor (K <sub>tl</sub> )	Interpreted q <sub>c-N</sub>	C <sub>N</sub>	q <sub>c1N</sub>	q <sub>c1N-CS</sub>	Stress Reduction Coeff. r <sub>d</sub>	CSR	K <sub>σ</sub> for Sand	CRR <sub>M=7.5</sub> σ <sub>vc</sub> = 1 atm	CRR	Factor of Safety (CRR/CSR)	Vertical Strain ε <sub>v</sub>	Settlement (Inches)
21.161	10.040	0.573	2614.4	2229.9	7.832	6.563	3.28		Clay	61.6			9.49	0.99	n.a.	n.a.	0.92	0.464	n.a.	n.a.	n.a.	n.a.	0.00	0.00
21.325	9.440	0.584	2634.1	2239.3	7.255	7.187	3.33		Clay	64.1			8.92	0.99	n.a.	n.a.	0.92	0.465	n.a.	n.a.	n.a.	n.a.	0.00	0.00
21.490	9.010	0.588	2653.7	2248.8	6.833	7.649	3.37		Clay	66.0			8.52	0.98	n.a.	n.a.	0.92	0.465	n.a.	n.a.	n.a.	n.a.	0.00	0.00
21.654	8.620	0.546	2673.4	2258.2	6.450	7.494	3.39		Clay	66.7			8.15	0.98	n.a.	n.a.	0.92	0.465	n.a.	n.a.	n.a.	n.a.	0.00	0.00
21.818	8.900	0.492	2693.1	2267.7	6.662	6.519	3.34		Clay	64.3			8.41	0.98	n.a.	n.a.	0.92	0.466	n.a.	n.a.	n.a.	n.a.	0.00	0.00
21.982	8.760	0.457	2712.8	2277.1	6.503	6.178	3.33		Clay	64.0			8.28	0.98	n.a.	n.a.	0.92	0.466	n.a.	n.a.	n.a.	n.a.	0.00	0.00
22.146	8.670	0.417	2732.5	2286.6	6.388	5.711	3.32		Clay	63.3			8.19	0.98	n.a.	n.a.	0.91	0.467	n.a.	n.a.	n.a.	n.a.	0.00	0.00
22.310	8.510	0.451	2752.2	2296.0	6.214	6.325	3.35		Clay	65.1			8.04	0.98	n.a.	n.a.	0.91	0.467	n.a.	n.a.	n.a.	n.a.	0.00	0.00
22.474	9.150	0.468	2771.9	2305.5	6.735	6.024	3.31		Clay	63.1			8.65	0.98	n.a.	n.a.	0.91	0.467	n.a.	n.a.	n.a.	n.a.	0.00	0.00
22.638	8.870	0.474	2791.5	2314.9	6.457	6.335	3.34		Clay	64.5			8.38	0.98	n.a.	n.a.	0.91	0.468	n.a.	n.a.	n.a.	n.a.	0.00	0.00
22.802	8.700	0.479	2811.2	2324.4	6.276	6.571	3.36		Clay	65.4			8.22	0.98	n.a.	n.a.	0.91	0.468	n.a.	n.a.	n.a.	n.a.	0.00	0.00
22.966	8.430	0.477	2830.9	2333.8	6.011	6.803	3.38		Clay	66.7			7.97	0.97	n.a.	n.a.	0.91	0.469	n.a.	n.a.	n.a.	n.a.	0.00	0.00
23.130	8.430	0.494	2850.6	2343.3	5.979	7.054	3.40		Clay	67.2			7.97	0.97	n.a.	n.a.	0.91	0.469	n.a.	n.a.	n.a.	n.a.	0.00	0.00
23.294	8.630	0.554	2870.3	2352.7	6.116	7.704	3.41		Clay	68.1			8.16	0.97	n.a.	n.a.	0.91	0.469	n.a.	n.a.	n.a.	n.a.	0.00	0.00
23.458	8.810	0.547	2890.0	2362.2	6.236	7.432	3.40		Clay	67.2			8.33	0.97	n.a.	n.a.	0.91	0.470	n.a.	n.a.	n.a.	n.a.	0.00	0.00
23.622	8.430	0.484	2909.6	2371.6	5.882	6.939	3.40		Clay	67.3			7.97	0.97	n.a.	n.a.	0.91	0.470	n.a.	n.a.	n.a.	n.a.	0.00	0.00
23.786	7.790	0.429	2929.3	2381.1	5.313	6.784	3.43		Clay	68.8			7.36	0.97	n.a.	n.a.	0.91	0.470	n.a.	n.a.	n.a.	n.a.	0.00	0.00
23.950	7.610	0.433	2949.0	2390.5	5.133	7.064	3.45		Clay	70.0			7.19	0.97	n.a.	n.a.	0.91	0.470	n.a.	n.a.	n.a.	n.a.	0.00	0.00
24.114	7.980	0.480	2968.7	2400.0	5.413	7.382	3.44		Clay	69.7			7.54	0.97	n.a.	n.a.	0.90	0.471	n.a.	n.a.	n.a.	n.a.	0.00	0.00
24.278	8.510	0.577	2988.4	2409.4	5.824	8.226	3.45		Clay	69.9			8.04	0.97	n.a.	n.a.	0.90	0.471	n.a.	n.a.	n.a.	n.a.	0.00	0.00
24.442	9.360	0.637	3008.1	2418.9	6.496	8.105	3.40		Clay	67.7			8.85	0.97	n.a.	n.a.	0.90	0.471	n.a.	n.a.	n.a.	n.a.	0.00	0.00
24.606	9.190	0.570	3027.8	2428.3	6.322	7.431	3.39		Clay	67.0			8.69	0.96	n.a.	n.a.	0.90	0.472	n.a.	n.a.	n.a.	n.a.	0.00	0.00
24.770	8.610	0.474	3047.4	2437.8	5.814	6.692	3.39		Clay	67.0			8.14	0.96	n.a.	n.a.	0.90	0.472	n.a.	n.a.	n.a.	n.a.	0.00	0.00
24.934	9.040	0.566	3067.1	2447.2	6.135	7.546	3.41		Clay	67.7			8.54	0.96	n.a.	n.a.	0.90	0.472	n.a.	n.a.	n.a.	n.a.	0.00	0.00
25.098	7.680	0.547	3086.8	2456.7	4.996	8.907	3.52		Clay	73.8			7.26	0.96	n.a.	n.a.	0.90	0.472	n.a.	n.a.	n.a.	n.a.	0.00	0.00
25.262	8.940	0.544	3106.5	2466.1	5.991	7.370	3.41		Clay	67.8			8.45	0.96	n.a.	n.a.	0.90	0.472	n.a.	n.a.	n.a.	n.a.	0.00	0.00
25.427	9.520	0.561	3126.2	2475.6	6.428	7.052	3.37		Clay	66.0			9.00	0.96	n.a.	n.a.	0.90	0.473	n.a.	n.a.	n.a.	n.a.	0.00	0.00
25.591	10.130	0.560	3145.9	2485.0	6.887	6.548	3.33		Clay	63.8			9.57	0.96	n.a.	n.a.	0.90	0.473	n.a.	n.a.	n.a.	n.a.	0.00	0.00
25.755	10.600	0.536	3165.6	2494.5	7.230	5.941	3.29		Clay	61.7			10.02	0.96	n.a.	n.a.	0.90	0.473	n.a.	n.a.	n.a.	n.a.	0.00	0.00
25.919	10.950	0.528	3185.2	2503.9	7.474	5.642	3.26		Clay	60.5			10.35	0.96	n.a.	n.a.	0.89	0.473	n.a.	n.a.	n.a.	n.a.	0.00	0.00
26.083	12.000	0.561	3204.9	2513.4	8.274	5.396	3.21		Clay	58.2			11.34	0.96	n.a.	n.a.	0.89	0.473	n.a.	n.a.	n.a.	n.a.	0.00	0.00
26.247	12.140	0.662	3224.6	2522.8	8.346	6.284	3.25		Clay	60.0			11.47	0.95	n.a.	n.a.	0.89	0.474	n.a.	n.a.	n.a.	n.a.	0.00	0.00
26.411	11.940	0.734	3244.3	2532.3	8.149	7.114	3.29		Clay	62.1			11.29	0.95	n.a.	n.a.	0.89	0.474	n.a.	n.a.	n.a.	n.a.	0.00	0.00
26.575	13.300	0.785	3264.0	2541.7	9.181	6.727	3.24		Clay	59.4			12.57	0.95	n.a.	n.a.	0.89	0.474	n.a.	n.a.	n.a.	n.a.	0.00	0.00
26.739	13.980	0.820	3283.7	2551.2	9.673	6.643	3.22		Clay	58.4			13.21	0.95	n.a.	n.a.	0.89	0.474	n.a.	n.a.	n.a.	n.a.	0.00	0.00
26.903	13.880	0.837	3303.3	2560.6	9.551	6.846	3.23		Clay	59.0			13.12	0.95	n.a.	n.a.	0.89	0.474	n.a.	n.a.	n.a.	n.a.	0.00	0.00
27.067	13.110	0.731	3323.0	2570.1	8.909	6.382	3.23		Clay	59.2			12.39	0.95	n.a.	n.a.	0.89	0.474	n.a.	n.a.	n.a.	n.a.	0.00	0.00
27.231	11.600	0.646	3342.7	2579.5	7.698	6.505	3.29		Clay	61.8			10.96	0.95	n.a.	n.a.	0.89	0.474	n.a.	n.a.	n.a.	n.a.	0.00	0.00
27.395	10.650	0.559	3362.4	2589.0	6.929	6.236	3.31		Clay	63.0			10.07	0.95	n.a.	n.a.	0.89	0.474	n.a.	n.a.	n.a.	n.a.	0.00	0.00
27.559	10.520	0.553	3382.1	2598.4	6.796	6.258	3.32		Clay	63.4			9.94	0.95	n.a.	n.a.	0.89	0.475	n.a.	n.a.	n.a.	n.a.	0.00	0.00
27.723	10.560	0.491	3401.8	2607.9	6.794	5.540	3.29		Clay	61.8			9.98	0.95	n.a.	n.a.	0.88	0.475	n.a.	n.a.	n.a.	n.a.	0.00	0.00
27.887	9.700	0.462	3421.5	2617.3	6.105	5.780	3.34		Clay	64.2			9.17	0.95	n.a.	n.a.	0.88	0.475	n.a.	n.a.	n.a.	n.a.	0.00	0.00
28.051	8.780	0.425	3441.1	2626.7	5.375	6.015	3.39		Clay	67.0			8.30	0.94	n.a.	n.a.	0.88	0.475	n.a.	n.a.	n.a.	n.a.	0.00	0.00
28.215	8.290	0.358	3460.8	2636.2	4.977	5.458	3.39		Clay	67.1			7.84	0.94	n.a.	n.a.	0.88	0.475	n.a.	n.a.	n.a.	n.a.	0.00	0.00
28.379	8.700	0.363	3480.5	2645.6	5.261	5.217	3.36		Clay	65.6			8.22	0.94	n.a.	n.a.	0.88	0.475	n.a.	n.a.	n.a.	n.a.	0.00	0.00
28.543	10.630	0.387	3500.2	2655.1	6.689	4.362	3.23		Clay	59.2			10.05	0.94	n.a.	n.a.	0.88	0.475	n.a.	n.a.	n.a.	n.a.	0.00	0.00
28.707	11.460	0.458	3519.9	2664.5	7.281	4.722	3.22		Clay	58.7			10.83	0.94	n.a.	n.a.	0.88	0.475	n.a.	n.a.	n.a.	n.a.	0.00	0.00
28.871	12.800	0.451	3539.6	2674.0	8.250	4.084	3.14		Clay	55.0			12.10	0.94	n.a.	n.a.	0.88	0.475	n.a.	n.a.	n.a.	n.a.	0.00	0.00
29.035	13.410	0.578	3559.3	2683.4	8.668	4.968	3.18		Clay	56.5			12.67	0.94	n.a.	n.a.	0.88	0.475	n.a.	n.a.	n.a.	n.a.	0.00	0.00
29.199	13.710	1.002	3579.9	2692.9	8.853	8.402	3.31		Clay	63.0			12.96	0.94	n.a.	n.a.	0.88	0.475	n.a.	n.a.	n.a.	n.a.	0.00	0.00
29.364	25.290	1.293	3598.6	2702.3	17.385	5.504	2.97		Clay	47.4			23.90	0.94	n.a.	n.a.	0.88	0.475	n.a.	n.a.	n.a.	n.a.	0.00	0.00
29.528	23.460	1.461	3618.3	2711.8	15.968	6.746	3.06		Clay	51.1			22.17	0.94	n.a.	n.a.	0.87	0.475	n.a.	n.a.	n.a.	n.a.	0.00	0.00
29.692	27.030	1.522	3638.0	2721.2	18.529	6.037	2.98		Clay	47.7			25.55	0.94	n.a.	n.a.	0.87	0.475	n.a.	n.a.	n.a.	n.a.	0.00	0.00
29.856	43.110	1.521	3657.7	2730.7	30.235	3.684	2.67		Clay	36.1			40.75	0.93	n.a.	n.a.	0.87	0.475	n.a.	n.a.	n.a.	n.a.	0.00	0.00
30.020	43.350	1.425	3677.4	2740.1	30.299	3.433	2.65		Clay	35.4			40.97	0.93	n.a.	n.a.	0.87	0.475	n.a.	n.a.	n.a.	n.a.	0.00	0.00
30.184	51.660	1.363	3697.0	2749.6	41.302	2.737	2.49		Sand	29.9	230	1.41	324.30	0.93	302.65	432.96	0.87	0.475	0.921	2.000	2.159	4.54	0.00	0.00
30.348	70.410	1.571	3716.7	2759.0	56.743	2.292	2.33		Sand	25.3	230	1.41	324.30	0.93	302.37	426								

CPT No. 4

PGA (A<sub>max</sub>) 0.50

Total Settlement: 0.00 (Inches)

Depth (ft)	q <sub>c</sub> (tsf)	f <sub>s</sub> (tsf)	σ <sub>vc</sub> (psf)	In situ σ'vc (psf)	Q	F (%)	lc	Layer "Plastic" PI > 7	Flag Soil Type	Fines (%)	q <sub>c-N</sub> near interfaces (soft layer)	Thin Layer Factor (K <sub>tl</sub> )	Interpreted q <sub>c-N</sub>	C <sub>N</sub>	q <sub>c1N</sub>	q <sub>c1N-CS</sub>	Stress Reduction Coeff. r <sub>d</sub>	CSR	K <sub>σ</sub> for Sand	CRRM=7.5, σ'vc = 1 atm	CRR	Factor of Safety (CRR/CSR)	Vertical Strain ε <sub>v</sub>	Settlement (Inches)
31.660	84.490	1.987	3874.2	2834.6	67.415	2.407	2.29		Sand	24.2	230	1.41	324.30	0.93	300.22	421.19	0.86	0.475	0.912	2.000	2.137	4.50	0.00	0.00
31.824	69.040	1.971	3893.9	2844.1	54.699	2.938	2.42		Sand	27.8	230	1.41	324.30	0.92	299.96	427.00	0.86	0.475	0.911	2.000	2.135	4.50	0.00	0.00
31.988	43.370	1.080	3913.6	2853.5	33.707	2.607	2.54		Sand	31.6	230	1.41	324.30	0.92	299.70	430.49	0.86	0.475	0.910	2.000	2.133	4.49	0.00	0.00
32.152	19.330	0.708	3933.3	2863.0	12.130	4.075	3.01		Clay	49.0			18.27	0.92	n.a.	n.a.	0.86	0.475	n.a.	n.a.	n.a.	n.a.	0.00	0.00
32.316	18.190	0.723	3953.0	2872.4	11.289	4.457	3.06		Clay	51.1			17.19	0.92	n.a.	n.a.	0.86	0.475	n.a.	n.a.	n.a.	n.a.	0.00	0.00
32.480	14.720	0.573	3972.6	2881.9	8.837	4.496	3.14		Clay	55.0			13.91	0.92	n.a.	n.a.	0.86	0.475	n.a.	n.a.	n.a.	n.a.	0.00	0.00
32.644	7.730	0.409	3992.3	2891.3	3.966	7.140	3.54		Clay	75.0			7.31	0.92	n.a.	n.a.	0.86	0.474	n.a.	n.a.	n.a.	n.a.	0.00	0.00
32.808	7.430	0.358	4012.0	2900.8	3.740	6.606	3.54		Clay	75.1			7.02	0.92	n.a.	n.a.	0.86	0.474	n.a.	n.a.	n.a.	n.a.	0.00	0.00
32.972	7.710	0.368	4031.7	2910.2	3.913	6.454	3.52		Clay	73.9			7.29	0.92	n.a.	n.a.	0.86	0.474	n.a.	n.a.	n.a.	n.a.	0.00	0.00
33.136	7.730	0.381	4051.4	2919.7	3.908	6.676	3.53		Clay	74.9			7.31	0.92	n.a.	n.a.	0.85	0.474	n.a.	n.a.	n.a.	n.a.	0.00	0.00
33.301	8.070	0.367	4071.1	2929.1	4.120	6.073	3.49		Clay	72.1			7.63	0.92	n.a.	n.a.	0.85	0.474	n.a.	n.a.	n.a.	n.a.	0.00	0.00
33.465	8.200	0.382	4090.7	2938.6	4.189	6.213	3.49		Clay	72.1			7.75	0.92	n.a.	n.a.	0.85	0.474	n.a.	n.a.	n.a.	n.a.	0.00	0.00
33.629	8.710	0.391	4110.4	2948.0	4.515	5.875	3.45		Clay	69.9			8.23	0.92	n.a.	n.a.	0.85	0.474	n.a.	n.a.	n.a.	n.a.	0.00	0.00
33.793	9.000	0.398	4130.1	2957.5	4.690	5.745	3.43		Clay	68.9			8.51	0.92	n.a.	n.a.	0.85	0.474	n.a.	n.a.	n.a.	n.a.	0.00	0.00
33.957	8.630	0.416	4149.8	2966.9	4.419	6.339	3.47		Clay	71.3			8.16	0.91	n.a.	n.a.	0.85	0.474	n.a.	n.a.	n.a.	n.a.	0.00	0.00
34.121	9.930	0.471	4169.5	2976.4	5.272	6.007	3.40		Clay	67.4			9.39	0.91	n.a.	n.a.	0.85	0.473	n.a.	n.a.	n.a.	n.a.	0.00	0.00
34.285	9.670	0.591	4189.2	2985.8	5.074	7.799	3.48		Clay	71.6			9.14	0.91	n.a.	n.a.	0.85	0.473	n.a.	n.a.	n.a.	n.a.	0.00	0.00
34.449	8.000	0.763	4208.9	2995.3	3.937	12.947	3.70		Clay	84.2			7.56	0.91	n.a.	n.a.	0.85	0.473	n.a.	n.a.	n.a.	n.a.	0.00	0.00
34.613	28.710	1.209	4228.5	3004.7	17.703	4.546	2.91		Clay	45.0			27.14	0.91	n.a.	n.a.	0.85	0.473	n.a.	n.a.	n.a.	n.a.	0.00	0.00
34.777	27.950	1.233	4248.2	3014.1	17.136	4.773	2.93		Clay	46.0			26.42	0.91	n.a.	n.a.	0.84	0.473	n.a.	n.a.	n.a.	n.a.	0.00	0.00
34.941	20.450	0.997	4267.9	3023.6	12.115	5.441	3.09		Clay	52.4			19.33	0.91	n.a.	n.a.	0.84	0.473	n.a.	n.a.	n.a.	n.a.	0.00	0.00
35.105	19.090	0.732	4287.6	3033.0	11.174	4.319	3.05		Clay	50.9			18.04	0.91	n.a.	n.a.	0.84	0.473	n.a.	n.a.	n.a.	n.a.	0.00	0.00
35.269	15.280	0.607	4307.3	3042.5	8.629	4.627	3.16		Clay	55.7			14.44	0.91	n.a.	n.a.	0.84	0.472	n.a.	n.a.	n.a.	n.a.	0.00	0.00
35.433	13.360	0.498	4327.0	3051.9	7.337	4.443	3.20		Clay	57.8			12.63	0.91	n.a.	n.a.	0.84	0.472	n.a.	n.a.	n.a.	n.a.	0.00	0.00
35.597	12.420	0.462	4346.7	3061.4	6.694	4.505	3.24		Clay	59.5			11.74	0.91	n.a.	n.a.	0.84	0.472	n.a.	n.a.	n.a.	n.a.	0.00	0.00
35.761	13.150	0.470	4366.3	3070.8	7.143	4.283	3.21		Clay	57.9			12.43	0.91	n.a.	n.a.	0.84	0.472	n.a.	n.a.	n.a.	n.a.	0.00	0.00
35.925	12.480	0.511	4386.0	3080.3	6.679	4.966	3.27		Clay	60.8			11.80	0.91	n.a.	n.a.	0.84	0.472	n.a.	n.a.	n.a.	n.a.	0.00	0.00
36.089	11.560	0.508	4405.7	3089.7	6.057	5.428	3.32		Clay	63.6			10.93	0.90	n.a.	n.a.	0.84	0.472	n.a.	n.a.	n.a.	n.a.	0.00	0.00
36.253	10.370	0.489	4425.4	3099.2	5.264	5.991	3.40		Clay	67.3			9.80	0.90	n.a.	n.a.	0.84	0.471	n.a.	n.a.	n.a.	n.a.	0.00	0.00
36.417	10.010	0.434	4445.1	3108.6	5.010	5.569	3.40		Clay	67.3			9.46	0.90	n.a.	n.a.	0.84	0.471	n.a.	n.a.	n.a.	n.a.	0.00	0.00
36.581	9.290	0.376	4464.8	3118.1	4.527	5.332	3.42		Clay	68.6			8.78	0.90	n.a.	n.a.	0.83	0.471	n.a.	n.a.	n.a.	n.a.	0.00	0.00
36.745	8.750	0.336	4484.4	3127.5	4.162	5.163	3.44		Clay	69.8			8.27	0.90	n.a.	n.a.	0.83	0.471	n.a.	n.a.	n.a.	n.a.	0.00	0.00
36.909	8.450	0.310	4504.1	3137.0	3.952	5.002	3.46		Clay	70.3			7.99	0.90	n.a.	n.a.	0.83	0.471	n.a.	n.a.	n.a.	n.a.	0.00	0.00
37.073	8.630	0.276	4523.8	3146.4	4.048	4.333	3.41		Clay	68.1			8.16	0.90	n.a.	n.a.	0.83	0.471	n.a.	n.a.	n.a.	n.a.	0.00	0.00
37.238	8.170	0.270	4543.5	3155.9	3.738	4.573	3.45		Clay	70.3			7.72	0.90	n.a.	n.a.	0.83	0.470	n.a.	n.a.	n.a.	n.a.	0.00	0.00
37.402	8.620	0.273	4563.2	3165.3	4.005	4.304	3.41		Clay	68.2			8.15	0.90	n.a.	n.a.	0.83	0.470	n.a.	n.a.	n.a.	n.a.	0.00	0.00
37.566	8.790	0.280	4582.9	3174.8	4.094	4.315	3.41		Clay	67.8			8.31	0.90	n.a.	n.a.	0.83	0.470	n.a.	n.a.	n.a.	n.a.	0.00	0.00
37.730	8.770	0.281	4602.6	3184.2	4.063	4.342	3.41		Clay	68.0			8.29	0.90	n.a.	n.a.	0.83	0.470	n.a.	n.a.	n.a.	n.a.	0.00	0.00
37.894	9.520	0.340	4622.2	3193.7	4.514	4.718	3.39		Clay	67.1			9.00	0.90	n.a.	n.a.	0.83	0.469	n.a.	n.a.	n.a.	n.a.	0.00	0.00
38.058	10.230	0.430	4641.9	3203.1	4.938	5.432	3.40		Clay	67.2			9.67	0.90	n.a.	n.a.	0.83	0.469	n.a.	n.a.	n.a.	n.a.	0.00	0.00
38.222	11.250	0.426	4661.6	3212.6	5.553	4.772	3.32		Clay	63.5			10.63	0.90	n.a.	n.a.	0.82	0.469	n.a.	n.a.	n.a.	n.a.	0.00	0.00
38.386	12.000	0.445	4681.3	3222.0	5.996	4.602	3.29		Clay	61.7			11.34	0.89	n.a.	n.a.	0.82	0.469	n.a.	n.a.	n.a.	n.a.	0.00	0.00
38.550	13.610	0.550	4701.0	3231.5	6.969	4.887	3.25		Clay	59.9			12.86	0.89	n.a.	n.a.	0.82	0.469	n.a.	n.a.	n.a.	n.a.	0.00	0.00
38.714	15.310	0.625	4720.7	3240.9	7.991	4.828	3.20		Clay	57.4			14.47	0.89	n.a.	n.a.	0.82	0.468	n.a.	n.a.	n.a.	n.a.	0.00	0.00
38.878	17.830	0.829	4740.4	3250.4	9.513	5.359	3.16		Clay	55.9			16.85	0.89	n.a.	n.a.	0.82	0.468	n.a.	n.a.	n.a.	n.a.	0.00	0.00
39.042	19.710	0.880	4760.0	3259.8	10.632	5.077	3.11		Clay	53.5			18.63	0.89	n.a.	n.a.	0.82	0.468	n.a.	n.a.	n.a.	n.a.	0.00	0.00
39.206	21.440	0.993	4779.7	3269.3	11.654	5.214	3.09		Clay	52.5			20.26	0.89	n.a.	n.a.	0.82	0.468	n.a.	n.a.	n.a.	n.a.	0.00	0.00
39.370	23.760	1.102	4799.4	3278.7	13.030	5.161	3.05		Clay	50.7			22.46	0.89	n.a.	n.a.	0.82	0.467	n.a.	n.a.	n.a.	n.a.	0.00	0.00
39.534	25.390	1.152	4819.1	3288.2	13.978	5.011	3.01		Clay	49.3			24.00	0.89	n.a.	n.a.	0.82	0.467	n.a.	n.a.	n.a.	n.a.	0.00	0.00
39.698	26.330	1.099	4838.8	3297.6	14.502	4.595	2.98		Clay	47.8			24.89	0.89	n.a.	n.a.	0.82	0.467	n.a.	n.a.	n.a.	n.a.	0.00	0.00
39.862	25.800	1.075	4858.5	3307.1	14.134	4.598	2.99		Clay	48.2			24.39	0.89	n.a.	n.a.	0.82	0.467	n.a.	n.a.	n.a.	n.a.	0.00	0.00
40.026	24.620	0.973	4878.1	3316.5	13.376	4.385	2.99		Clay	48.4			23.27	0.89	n.a.	n.a.	0.81	0.466	n.a.	n.a.	n.a.	n.a.	0.00	0.00
40.190	22.530	0.895	4897.8	3326.0	12.075	4.454	3.03		Clay	50.1			21.29	0.89	n.a.	n.a.	0.81	0.466	n.a.	n.a.	n.a.	n.a.	0.00	0.00
40.354	20.110	0.897	4917.5	3335.4	10.584	5.080	3.11		Clay	53.6			19.01	0.89	n.a.	n.a.	0.81	0.466	n.a.	n.a.	n.a.	n.a.	0.00	0.00
40.518	16.770	0.797	4937.2	3344.9	8.551	5.575	3.21		Clay	58.1			15.85	0.89	n.a.	n.a.	0.81	0.466	n.a.	n.a.	n.a.	n.a.	0.00	0.00
40.682	13.260	0.629	4956.9	3354.3	6.428	5.836	3.32		Clay	63.5			12.53	0.89	n.a.	n.a.	0.81	0.465	n.a.	n.a.	n.a.	n.a.	0.00	0.00
40.846	12.200	0.573	4976.6	3363.8	5.774	5.899																		

Depth (ft)	q <sub>c</sub> (tsf)	f <sub>s</sub> (tsf)	σ <sub>vc</sub> (psf)	In situ σ'vc (psf)	Q	F (%)	lc	Layer "Plastic" PI > 7	Flag Soil Type	Fines (%)	Qc-N near interfaces (soft layer)	Thin Layer Factor (K <sub>tl</sub> )	Interpreted q <sub>cN</sub>	C <sub>N</sub>	q <sub>c1N</sub>	q <sub>c1N-CS</sub>	Stress Reduction Coeff. r <sub>d</sub>	CSR	K <sub>σ</sub> for Sand	CRR <sub>M=7.5</sub> σ'vc = 1 atm	CRR	Factor of Safety (CRR/CSR)	Vertical Strain ε <sub>v</sub>	Settlement (Inches)
42.159	22.120	0.557	5134.1	3439.3	11.370	2.846	2.94		Clay	46.1	20.91	0.88	n.a.	n.a.	n.a.	0.80	0.463	n.a.	n.a.	n.a.	n.a.	0.00	0.00	
42.323	21.500	0.508	5153.7	3448.8	10.974	2.682	2.94		Clay	46.1	20.32	0.88	n.a.	n.a.	n.a.	0.80	0.463	n.a.	n.a.	n.a.	n.a.	0.00	0.00	
42.487	17.210	0.513	5173.4	3458.2	8.457	3.511	3.10		Clay	52.9	16.27	0.88	n.a.	n.a.	n.a.	0.80	0.462	n.a.	n.a.	n.a.	n.a.	0.00	0.00	
42.651	13.880	0.568	5193.1	3467.7	6.508	5.030	3.28		Clay	61.4	13.12	0.88	n.a.	n.a.	n.a.	0.80	0.462	n.a.	n.a.	n.a.	n.a.	0.00	0.00	
42.815	13.500	0.519	5212.8	3477.1	6.266	4.765	3.28		Clay	61.4	12.76	0.88	n.a.	n.a.	n.a.	0.80	0.462	n.a.	n.a.	n.a.	n.a.	0.00	0.00	
42.979	13.270	0.545	5232.5	3486.6	6.111	5.117	3.31		Clay	62.7	12.54	0.88	n.a.	n.a.	n.a.	0.80	0.461	n.a.	n.a.	n.a.	n.a.	0.00	0.00	
43.143	12.930	0.589	5252.2	3496.0	5.895	5.720	3.35		Clay	64.7	12.22	0.88	n.a.	n.a.	n.a.	0.80	0.461	n.a.	n.a.	n.a.	n.a.	0.00	0.00	
43.307	13.170	0.583	5271.9	3505.5	6.010	5.534	3.33		Clay	64.0	12.45	0.88	n.a.	n.a.	n.a.	0.80	0.461	n.a.	n.a.	n.a.	n.a.	0.00	0.00	
43.471	13.150	0.613	5291.5	3514.9	5.977	5.833	3.35		Clay	64.7	12.43	0.87	n.a.	n.a.	n.a.	0.79	0.461	n.a.	n.a.	n.a.	n.a.	0.00	0.00	
43.635	12.520	0.667	5311.2	3524.4	5.598	6.766	3.41		Clay	67.9	11.83	0.87	n.a.	n.a.	n.a.	0.79	0.460	n.a.	n.a.	n.a.	n.a.	0.00	0.00	
43.799	12.870	0.682	5330.9	3533.8	5.775	6.684	3.39		Clay	67.1	12.16	0.87	n.a.	n.a.	n.a.	0.79	0.460	n.a.	n.a.	n.a.	n.a.	0.00	0.00	
43.963	13.930	0.677	5350.6	3543.3	6.353	6.013	3.33		Clay	64.1	13.17	0.87	n.a.	n.a.	n.a.	0.79	0.460	n.a.	n.a.	n.a.	n.a.	0.00	0.00	
44.127	14.150	0.674	5370.3	3552.7	6.454	5.875	3.32		Clay	63.5	13.37	0.87	n.a.	n.a.	n.a.	0.79	0.459	n.a.	n.a.	n.a.	n.a.	0.00	0.00	
44.291	13.420	0.650	5390.0	3562.2	6.022	6.062	3.35		Clay	65.1	12.68	0.87	n.a.	n.a.	n.a.	0.79	0.459	n.a.	n.a.	n.a.	n.a.	0.00	0.00	
44.455	13.340	0.556	5409.6	3571.6	5.955	5.226	3.32		Clay	63.4	12.61	0.87	n.a.	n.a.	n.a.	0.79	0.459	n.a.	n.a.	n.a.	n.a.	0.00	0.00	
44.619	13.530	0.611	5429.3	3581.1	6.040	5.648	3.33		Clay	64.1	12.79	0.87	n.a.	n.a.	n.a.	0.79	0.458	n.a.	n.a.	n.a.	n.a.	0.00	0.00	
44.783	11.140	0.642	5449.0	3590.5	4.688	7.628	3.50		Clay	72.8	10.53	0.87	n.a.	n.a.	n.a.	0.79	0.458	n.a.	n.a.	n.a.	n.a.	0.00	0.00	
44.948	14.050	0.686	5468.7	3600.0	6.287	6.065	3.34		Clay	64.4	13.28	0.87	n.a.	n.a.	n.a.	0.79	0.458	n.a.	n.a.	n.a.	n.a.	0.00	0.00	
45.112	14.090	0.690	5488.4	3609.4	6.287	6.081	3.34		Clay	64.4	13.32	0.87	n.a.	n.a.	n.a.	0.78	0.457	n.a.	n.a.	n.a.	n.a.	0.00	0.00	
45.276	14.370	0.736	5508.1	3618.9	6.420	6.333	3.34		Clay	64.6	13.58	0.87	n.a.	n.a.	n.a.	0.78	0.457	n.a.	n.a.	n.a.	n.a.	0.00	0.00	
45.440	14.900	0.786	5527.8	3628.3	6.690	6.479	3.33		Clay	64.1	14.08	0.87	n.a.	n.a.	n.a.	0.78	0.457	n.a.	n.a.	n.a.	n.a.	0.00	0.00	
45.604	14.910	0.747	5547.4	3637.8	6.672	6.157	3.32		Clay	63.5	14.09	0.87	n.a.	n.a.	n.a.	0.78	0.457	n.a.	n.a.	n.a.	n.a.	0.00	0.00	
45.768	14.250	0.742	5567.1	3647.2	6.288	6.472	3.36		Clay	65.2	13.47	0.87	n.a.	n.a.	n.a.	0.78	0.456	n.a.	n.a.	n.a.	n.a.	0.00	0.00	
45.932	15.900	0.683	5586.8	3656.7	7.169	5.207	3.25		Clay	60.2	15.03	0.87	n.a.	n.a.	n.a.	0.78	0.456	n.a.	n.a.	n.a.	n.a.	0.00	0.00	
46.096	15.520	0.675	5606.5	3666.1	6.937	5.306	3.27		Clay	60.9	14.67	0.87	n.a.	n.a.	n.a.	0.78	0.456	n.a.	n.a.	n.a.	n.a.	0.00	0.00	
46.260	15.150	0.809	5626.2	3675.6	6.713	6.559	3.34		Clay	64.2	14.32	0.86	n.a.	n.a.	n.a.	0.78	0.455	n.a.	n.a.	n.a.	n.a.	0.00	0.00	
46.424	20.350	0.552	5645.9	3685.0	9.513	3.151	3.03		Clay	49.9	19.23	0.86	n.a.	n.a.	n.a.	0.78	0.455	n.a.	n.a.	n.a.	n.a.	0.00	0.00	
46.588	21.600	0.402	5665.6	3694.5	10.160	2.144	2.91		Clay	45.0	20.42	0.86	n.a.	n.a.	n.a.	0.78	0.455	n.a.	n.a.	n.a.	n.a.	0.00	0.00	
46.752	14.410	0.571	5685.2	3703.9	6.246	4.936	3.29		Clay	61.8	13.62	0.86	n.a.	n.a.	n.a.	0.78	0.454	n.a.	n.a.	n.a.	n.a.	0.00	0.00	
46.916	15.260	0.647	5704.9	3713.4	6.683	5.218	3.28		Clay	61.4	14.42	0.86	n.a.	n.a.	n.a.	0.77	0.454	n.a.	n.a.	n.a.	n.a.	0.00	0.00	
47.080	16.310	0.683	5724.6	3722.8	7.224	5.080	3.24		Clay	59.7	15.42	0.86	n.a.	n.a.	n.a.	0.77	0.454	n.a.	n.a.	n.a.	n.a.	0.00	0.00	
47.244	18.410	0.700	5744.3	3732.3	8.326	4.506	3.16		Clay	56.0	17.40	0.86	n.a.	n.a.	n.a.	0.77	0.453	n.a.	n.a.	n.a.	n.a.	0.00	0.00	
47.408	19.340	0.832	5764.0	3741.7	8.797	5.058	3.17		Clay	56.5	18.28	0.86	n.a.	n.a.	n.a.	0.77	0.453	n.a.	n.a.	n.a.	n.a.	0.00	0.00	
47.572	21.000	0.987	5783.7	3751.2	9.655	5.451	3.16		Clay	55.9	19.85	0.86	n.a.	n.a.	n.a.	0.77	0.453	n.a.	n.a.	n.a.	n.a.	0.00	0.00	
47.736	23.490	1.251	5803.3	3760.6	10.949	6.076	3.15		Clay	55.3	22.20	0.86	n.a.	n.a.	n.a.	0.77	0.452	n.a.	n.a.	n.a.	n.a.	0.00	0.00	
47.900	26.490	1.337	5823.0	3770.1	12.508	5.669	3.09		Clay	52.4	25.04	0.86	n.a.	n.a.	n.a.	0.77	0.452	n.a.	n.a.	n.a.	n.a.	0.00	0.00	
48.064	25.160	1.560	5842.7	3779.5	11.768	7.013	3.17		Clay	56.0	23.78	0.86	n.a.	n.a.	n.a.	0.77	0.451	n.a.	n.a.	n.a.	n.a.	0.00	0.00	
48.228	27.430	1.543	5862.4	3789.0	12.932	6.299	3.10		Clay	53.3	25.93	0.86	n.a.	n.a.	n.a.	0.77	0.451	n.a.	n.a.	n.a.	n.a.	0.00	0.00	
48.392	26.270	1.436	5882.1	3798.4	12.284	6.156	3.12		Clay	53.7	24.83	0.86	n.a.	n.a.	n.a.	0.77	0.451	n.a.	n.a.	n.a.	n.a.	0.00	0.00	
48.556	25.580	1.315	5901.8	3807.9	11.886	5.813	3.11		Clay	53.5	24.18	0.86	n.a.	n.a.	n.a.	0.77	0.450	n.a.	n.a.	n.a.	n.a.	0.00	0.00	
48.720	24.800	1.261	5921.5	3817.3	11.442	5.775	3.12		Clay	54.0	23.44	0.86	n.a.	n.a.	n.a.	0.76	0.450	n.a.	n.a.	n.a.	n.a.	0.00	0.00	
48.885	22.360	1.099	5941.1	3826.7	10.134	5.670	3.16		Clay	55.6	21.13	0.86	n.a.	n.a.	n.a.	0.76	0.450	n.a.	n.a.	n.a.	n.a.	0.00	0.00	
49.049	20.710	0.954	5960.8	3836.2	9.243	5.381	3.17		Clay	56.4	19.57	0.85	n.a.	n.a.	n.a.	0.76	0.449	n.a.	n.a.	n.a.	n.a.	0.00	0.00	
49.213	20.440	1.066	5980.5	3845.6	9.075	6.107	3.21		Clay	58.3	19.32	0.85	n.a.	n.a.	n.a.	0.76	0.449	n.a.	n.a.	n.a.	n.a.	0.00	0.00	
49.377	23.810	1.346	6000.2	3855.1	10.796	6.470	3.17		Clay	56.3	22.50	0.85	n.a.	n.a.	n.a.	0.76	0.449	n.a.	n.a.	n.a.	n.a.	0.00	0.00	
49.541	28.310	1.218	6019.9	3864.5	13.093	4.813	3.03		Clay	49.8	26.76	0.85	n.a.	n.a.	n.a.	0.76	0.448	n.a.	n.a.	n.a.	n.a.	0.00	0.00	
49.705	20.160	1.034	6039.6	3874.0	8.849	6.030	3.22		Clay	58.6	19.05	0.85	n.a.	n.a.	n.a.	0.76	0.448	n.a.	n.a.	n.a.	n.a.	0.00	0.00	
49.869	15.980	0.757	6059.3	3883.4	6.670	5.844	3.31		Clay	62.8	15.10	0.85	n.a.	n.a.	n.a.	0.76	0.448	n.a.	n.a.	n.a.	n.a.	0.00	0.00	
50.033	14.220	0.562	6078.9	3892.9	5.744	5.027	3.32		Clay	63.5	13.44	0.85	n.a.	n.a.	n.a.	0.76	0.447	n.a.	n.a.	n.a.	n.a.	0.00	0.00	
50.197	13.560	0.464	6098.6	3902.3	5.387	4.415	3.31		Clay	63.1	12.82	0.85	n.a.	n.a.	n.a.	0.76	0.447	n.a.	n.a.	n.a.	n.a.	0.00	0.00	
50.361	12.680	0.474	6118.3	3911.8	4.919	4.923	3.37		Clay	66.0	11.98	0.85	n.a.	n.a.	n.a.	0.76	0.447	n.a.	n.a.	n.a.	n.a.	0.00	0.00	
50.525	13.820	0.459	6138.0	3921.2	5.483	4.273	3.30		Clay	62.4	13.06	0.85	n.a.	n.a.	n.a.	0.75	0.446	n.a.	n.a.	n.a.	n.a.	0.00	0.00	
50.689	14.910	0.547	6157.7	3930.7	6.020	4.623	3.28		Clay	61.7	14.09	0.85	n.a.	n.a.	n.a.	0.75	0.446	n.a.	n.a.	n.a.	n.a.	0.00	0.00	
50.853	17.000	0.642	6177.4	3940.1	7.061	4.617	3.23		Clay	58.9	16.07	0.85	n.a.	n.a.	n.a.	0.75	0.445	n.a.	n.a.	n.a.	n.a.	0.00	0.00	
51.017	18.830	0.674	6197.0	3949.6	7.966	4.286	3.17		Clay	56.1	17.80	0.85	n.a.	n.a.	n.a.	0.75	0.445	n.a.	n.a.	n.a.	n.a.	0.00	0.00	
51.181	18.600	0.634	6216.7	3959.0	7.826	4.093	3.16		Clay	55.8	17.58	0.85	n.a.	n.a.	n.a.	0.75	0.445	n.a.	n.a.	n.a.	n.a.	0.00	0.00	
51.345	17.340	0.566	6236.4	3968.5	7.167	3.983	3.19		Clay	57.0	16.39	0.85	n.a.	n.a.	n.a.	0.75	0.444	n.a.	n.a.	n.a.	n.a.	0.00	0.00	
51.509	16.170	0.571	6256.1																					

Depth (ft)	q <sub>c</sub> (tsf)	f <sub>s</sub> (tsf)	σ <sub>vc</sub> (psf)	In situ σ'vc (psf)	Q	F (%)	lc	Layer "Plastic" PI > 7	Flag Soil Type	Fines (%)	q <sub>c</sub> -N near interfaces (soft layer)	Thin Layer Factor (K <sub>tl</sub> )	Interpreted q <sub>c</sub> -N	C <sub>N</sub>	q <sub>c</sub> -1N	q <sub>c</sub> -1N-CS	Stress Reduction Coeff. r <sub>d</sub>	CSR	K <sub>σ</sub> for Sand	CRR <sub>M=7.5</sub> σ'vc = 1 atm	CRR	Factor of Safety (CRR/C <sub>SR</sub> )	Vertical Strain ε <sub>v</sub>	Settlement (Inches)
52.657	17.640	1.202	6393.9	4044.1	7.143	8.324	3.38		Clay	66.4			16.67	0.84	n.a.	n.a.	0.74	0.441	n.a.	n.a.	n.a.	n.a.	0.00	0.00
52.822	35.250	1.294	6413.6	4053.5	15.810	4.037	2.91		Clay	45.2			33.32	0.84	n.a.	n.a.	0.74	0.441	n.a.	n.a.	n.a.	n.a.	0.00	0.00
52.986	61.790	1.977	6433.3	4063.0	28.833	3.375	2.66		Clay	35.8			58.40	0.84	n.a.	n.a.	0.74	0.441	n.a.	n.a.	n.a.	n.a.	0.00	0.00
53.150	49.440	1.700	6453.0	4072.4	22.696	3.678	2.77		Clay	39.5			46.73	0.84	n.a.	n.a.	0.74	0.440	n.a.	n.a.	n.a.	n.a.	0.00	0.00
53.314	28.200	1.008	6472.6	4081.9	12.232	4.037	3.00		Clay	48.8			26.65	0.84	n.a.	n.a.	0.74	0.440	n.a.	n.a.	n.a.	n.a.	0.00	0.00
53.478	19.860	0.877	6492.3	4091.3	8.122	5.280	3.21		Clay	58.3			18.77	0.84	n.a.	n.a.	0.74	0.440	n.a.	n.a.	n.a.	n.a.	0.00	0.00
53.642	16.940	0.741	6512.0	4100.8	6.674	5.418	3.29		Clay	61.9			16.01	0.84	n.a.	n.a.	0.74	0.439	n.a.	n.a.	n.a.	n.a.	0.00	0.00
53.806	16.220	0.691	6531.7	4110.2	6.303	5.333	3.30		Clay	62.7			15.33	0.84	n.a.	n.a.	0.74	0.439	n.a.	n.a.	n.a.	n.a.	0.00	0.00
53.970	15.210	0.655	6551.4	4119.7	5.794	5.492	3.34		Clay	64.5			14.38	0.84	n.a.	n.a.	0.74	0.438	n.a.	n.a.	n.a.	n.a.	0.00	0.00
54.134	15.800	0.649	6571.1	4129.1	6.062	5.184	3.31		Clay	63.0			14.93	0.84	n.a.	n.a.	0.73	0.438	n.a.	n.a.	n.a.	n.a.	0.00	0.00
54.298	16.160	0.859	6590.7	4138.6	6.217	6.673	3.37		Clay	65.8			15.27	0.84	n.a.	n.a.	0.73	0.438	n.a.	n.a.	n.a.	n.a.	0.00	0.00
54.462	17.410	0.832	6610.4	4148.0	6.801	5.899	3.30		Clay	62.6			16.46	0.84	n.a.	n.a.	0.73	0.437	n.a.	n.a.	n.a.	n.a.	0.00	0.00
54.626	21.500	0.712	6630.1	4157.5	8.748	3.916	3.11		Clay	53.5			20.32	0.84	n.a.	n.a.	0.73	0.437	n.a.	n.a.	n.a.	n.a.	0.00	0.00
54.790	15.100	0.515	6649.8	4166.9	5.652	4.374	3.29		Clay	62.1			14.27	0.84	n.a.	n.a.	0.73	0.437	n.a.	n.a.	n.a.	n.a.	0.00	0.00
54.954	12.560	0.397	6669.5	4176.4	4.418	4.298	3.38		Clay	66.3			11.87	0.84	n.a.	n.a.	0.73	0.436	n.a.	n.a.	n.a.	n.a.	0.00	0.00
55.118	13.110	0.439	6689.2	4185.8	4.666	4.498	3.37		Clay	65.9			12.39	0.84	n.a.	n.a.	0.73	0.436	n.a.	n.a.	n.a.	n.a.	0.00	0.00
55.282	16.410	0.499	6708.9	4195.3	6.224	3.818	3.23		Clay	58.8			15.51	0.83	n.a.	n.a.	0.73	0.435	n.a.	n.a.	n.a.	n.a.	0.00	0.00
55.446	18.160	0.488	6728.5	4204.7	7.038	3.299	3.15		Clay	55.1			17.16	0.83	n.a.	n.a.	0.73	0.435	n.a.	n.a.	n.a.	n.a.	0.00	0.00
55.610	17.030	0.449	6748.2	4214.1	6.481	3.286	3.18		Clay	56.5			16.10	0.83	n.a.	n.a.	0.73	0.435	n.a.	n.a.	n.a.	n.a.	0.00	0.00
55.774	16.080	0.442	6767.9	4223.6	6.012	3.479	3.22		Clay	58.4			15.20	0.83	n.a.	n.a.	0.73	0.434	n.a.	n.a.	n.a.	n.a.	0.00	0.00
55.938	16.740	0.450	6787.6	4233.0	6.306	3.374	3.19		Clay	57.2			15.82	0.83	n.a.	n.a.	0.72	0.434	n.a.	n.a.	n.a.	n.a.	0.00	0.00
56.102	16.920	0.664	6807.3	4242.5	6.372	4.912	3.28		Clay	61.4			15.99	0.83	n.a.	n.a.	0.72	0.433	n.a.	n.a.	n.a.	n.a.	0.00	0.00
56.266	23.240	0.625	6827.0	4251.9	9.326	3.154	3.03		Clay	50.2			21.97	0.83	n.a.	n.a.	0.72	0.433	n.a.	n.a.	n.a.	n.a.	0.00	0.00
56.430	20.610	0.634	6846.7	4261.4	8.066	3.687	3.12		Clay	54.2			19.48	0.83	n.a.	n.a.	0.72	0.433	n.a.	n.a.	n.a.	n.a.	0.00	0.00
56.594	19.010	0.954	6866.3	4270.8	7.294	6.125	3.29		Clay	61.9			17.97	0.83	n.a.	n.a.	0.72	0.432	n.a.	n.a.	n.a.	n.a.	0.00	0.00
56.759	31.590	0.957	6886.0	4280.3	13.152	3.401	2.93		Clay	45.9			29.86	0.83	n.a.	n.a.	0.72	0.432	n.a.	n.a.	n.a.	n.a.	0.00	0.00
56.923	50.750	1.181	6905.7	4289.7	22.051	2.497	2.67		Clay	36.0			47.97	0.83	n.a.	n.a.	0.72	0.432	n.a.	n.a.	n.a.	n.a.	0.00	0.00
57.087	38.300	1.155	6925.4	4299.2	16.206	3.315	2.85		Clay	42.7			36.20	0.83	n.a.	n.a.	0.72	0.431	n.a.	n.a.	n.a.	n.a.	0.00	0.00
57.251	31.270	1.486	6945.1	4308.6	12.903	5.345	3.06		Clay	51.3			29.56	0.83	n.a.	n.a.	0.72	0.431	n.a.	n.a.	n.a.	n.a.	0.00	0.00
57.415	40.460	2.141	6964.8	4318.1	17.127	5.791	2.99		Clay	48.2			38.24	0.83	n.a.	n.a.	0.72	0.430	n.a.	n.a.	n.a.	n.a.	0.00	0.00
57.579	74.840	1.992	6984.4	4327.5	47.155	2.791	2.45		Sand	28.8	88.53	1.8	159.35	0.79	125.36	195.63	0.72	0.430	0.821	0.939	0.903	2.10	0.00	0.00
57.743	93.640	1.418	7004.1	4337.0	59.509	1.573	2.21		Sand	22.0	88.53	1.8	159.35	0.78	124.20	186.94	0.71	0.430	0.837	0.672	0.659	1.53	0.00	0.00
57.907	93.670	1.456	7023.8	4346.4	59.458	1.614	2.22		Sand	22.2		1.8	159.36	0.78	124.14	187.19	0.71	0.429	0.836	0.678	0.664	1.55	0.00	0.00
58.071	66.350	1.603	7043.5	4355.9	41.389	2.552	2.47		Sand	29.3	88.53	1.8	159.35	0.78	125.07	195.55	0.71	0.429	0.820	0.935	0.898	2.09	0.00	0.00
58.235	35.780	1.423	7063.2	4365.3	14.775	4.413	2.96		Clay	47.1			33.82	0.83	n.a.	n.a.	0.71	0.429	n.a.	n.a.	n.a.	n.a.	0.00	0.00
58.399	23.210	1.173	7082.9	4374.8	8.992	5.961	3.21		Clay	58.1			21.94	0.83	n.a.	n.a.	0.71	0.428	n.a.	n.a.	n.a.	n.a.	0.00	0.00
58.563	20.690	0.792	7102.6	4384.2	7.818	4.619	3.19		Clay	57.3			19.56	0.83	n.a.	n.a.	0.71	0.428	n.a.	n.a.	n.a.	n.a.	0.00	0.00
58.727	18.100	0.653	7122.2	4393.7	6.618	4.493	3.24		Clay	59.7			17.11	0.82	n.a.	n.a.	0.71	0.427	n.a.	n.a.	n.a.	n.a.	0.00	0.00
58.891	16.870	0.628	7141.9	4403.1	6.041	4.722	3.29		Clay	61.9			15.95	0.82	n.a.	n.a.	0.71	0.427	n.a.	n.a.	n.a.	n.a.	0.00	0.00
59.055	16.580	0.612	7161.6	4412.6	5.892	4.711	3.30		Clay	62.3			15.67	0.82	n.a.	n.a.	0.71	0.427	n.a.	n.a.	n.a.	n.a.	0.00	0.00
59.219	16.140	0.606	7181.3	4422.0	5.676	4.831	3.32		Clay	63.2			15.26	0.82	n.a.	n.a.	0.71	0.426	n.a.	n.a.	n.a.	n.a.	0.00	0.00
59.383	15.740	0.604	7201.0	4431.5	5.479	4.971	3.34		Clay	64.2			14.88	0.82	n.a.	n.a.	0.71	0.426	n.a.	n.a.	n.a.	n.a.	0.00	0.00
59.547	15.720	0.587	7220.7	4440.9	5.454	4.849	3.33		Clay	64.0			14.86	0.82	n.a.	n.a.	0.71	0.425	n.a.	n.a.	n.a.	n.a.	0.00	0.00
59.711	15.510	0.578	7240.4	4450.4	5.343	4.861	3.34		Clay	64.4			14.66	0.82	n.a.	n.a.	0.70	0.425	n.a.	n.a.	n.a.	n.a.	0.00	0.00
59.875	15.280	0.565	7260.0	4459.8	5.224	4.847	3.35		Clay	64.8			14.44	0.82	n.a.	n.a.	0.70	0.425	n.a.	n.a.	n.a.	n.a.	0.00	0.00
60.039	15.280	0.611	7279.7	4469.3	5.209	5.246	3.37		Clay	65.8			14.44	0.82	n.a.	n.a.	0.70	0.424	n.a.	n.a.	n.a.	n.a.	0.00	0.00
60.203	17.110	0.631	7299.4	4478.7	6.011	4.684	3.29		Clay	61.9			16.17	0.82	n.a.	n.a.	0.70	0.424	n.a.	n.a.	n.a.	n.a.	0.00	0.00
60.367	17.820	0.632	7319.1	4488.2	6.310	4.460	3.26		Clay	60.4			16.84	0.82	n.a.	n.a.	0.70	0.424	n.a.	n.a.	n.a.	n.a.	0.00	0.00
60.531	17.690	0.623	7338.8	4497.6	6.235	4.441	3.26		Clay	60.6			16.72	0.82	n.a.	n.a.	0.70	0.423	n.a.	n.a.	n.a.	n.a.	0.00	0.00
60.696	18.190	0.688	7358.5	4507.1	6.439	4.738	3.27		Clay	60.8			17.19	0.82	n.a.	n.a.	0.70	0.423	n.a.	n.a.	n.a.	n.a.	0.00	0.00
60.860	19.550	0.936	7378.1	4516.5	7.024	5.899	3.29		Clay	62.1			18.48	0.82	n.a.	n.a.	0.70	0.422	n.a.	n.a.	n.a.	n.a.	0.00	0.00
61.024	22.570	1.177	7397.8	4526.0	8.339	6.236	3.25		Clay	59.9			21.33	0.82	n.a.	n.a.	0.70	0.422	n.a.	n.a.	n.a.	n.a.	0.00	0.00
61.188	27.630	1.090	7417.5	4535.4	10.549	4.558	3.08		Clay	52.4			26.12	0.82	n.a.	n.a.	0.70	0.422	n.a.	n.a.	n.a.	n.a.	0.00	0.00
61.352	23.220	0.840	7437.2	4544.9	8.582	4.306	3.14		Clay	54.9			21.95	0.82	n.a.	n.a.	0.70	0.421	n.a.	n.a.	n.a.	n.a.	0.00	0.00
61.516	20.270	0.644	7456.9	4554.3	7.264	3.894	3.18		Clay	56.5			19.16	0.82	n.a.	n.a.	0.70	0.421	n.a.	n.a.	n.a.	n.a.	0.00	0.00
61.680	18.260	0.525	7476.6	4563.8	6.364	3.618	3.20		Clay	57.9			17.26	0.82	n.a.	n.a.	0.69	0.420	n.a.	n.a.	n.a.	n.a.	0.00</	

Depth (ft)	$q_c$ (tsf)	$f_s$ (tsf)	$\sigma_{vc}$ (psf)	In situ $\sigma'_{vc}$ (psf)	Q	F (%)	$l_c$	Layer "Plastic" PI > 7	Flag Soil Type	Fines (%)	$q_{cN}$ near interfaces (soft layer)	Thin Layer Factor ( $K_{tL}$ )	Interpreted $q_{cN}$	$C_N$	$q_{c1N}$	$q_{c1N-CS}$	Stress Reduction Coeff. $r_d$	CSR	$K_{cs}$ for Sand	$CRR_{M=7.5}$ $r'_{vc} = 1 \text{ atm}$	CRR	Factor of Safety (CRR/CSR)	Vertical Strain $\epsilon_v$	Settlement (Inches)
63.156	15.260	0.522	7653.7	4648.8	4.919	4.563	3.35		Clay	65.1			14.42	0.81	n.a.	n.a.	0.69	0.417	n.a.	n.a.	n.a.	n.a.	0.00	0.00
63.320	14.830	0.540	7673.4	4658.2	4.720	4.911	3.39		Clay	66.8			14.02	0.81	n.a.	n.a.	0.69	0.417	n.a.	n.a.	n.a.	n.a.	0.00	0.00
63.484	15.470	0.587	7693.1	4667.7	4.980	5.052	3.37		Clay	66.1			14.62	0.81	n.a.	n.a.	0.69	0.416	n.a.	n.a.	n.a.	n.a.	0.00	0.00
63.648	16.250	0.646	7712.8	4677.1	5.300	5.211	3.36		Clay	65.4			15.36	0.81	n.a.	n.a.	0.68	0.416	n.a.	n.a.	n.a.	n.a.	0.00	0.00
63.812	16.520	0.636	7732.5	4686.6	5.400	5.024	3.34		Clay	64.6			15.61	0.81	n.a.	n.a.	0.68	0.415	n.a.	n.a.	n.a.	n.a.	0.00	0.00
63.976	15.890	0.636	7752.2	4696.0	5.117	5.292	3.38		Clay	66.2			15.02	0.81	n.a.	n.a.	0.68	0.415	n.a.	n.a.	n.a.	n.a.	0.00	0.00
64.140	16.280	0.669	7771.9	4705.5	5.268	5.394	3.37		Clay	66.0			15.39	0.81	n.a.	n.a.	0.68	0.415	n.a.	n.a.	n.a.	n.a.	0.00	0.00
64.304	16.980	0.729	7791.5	4714.9	5.550	5.571	3.36		Clay	65.4			16.05	0.81	n.a.	n.a.	0.68	0.414	n.a.	n.a.	n.a.	n.a.	0.00	0.00
64.469	17.110	0.739	7811.2	4724.4	5.590	5.596	3.36		Clay	65.4			16.17	0.81	n.a.	n.a.	0.68	0.414	n.a.	n.a.	n.a.	n.a.	0.00	0.00
64.633	17.540	0.766	7830.9	4733.8	5.756	5.624	3.35		Clay	64.9			16.58	0.81	n.a.	n.a.	0.68	0.414	n.a.	n.a.	n.a.	n.a.	0.00	0.00
64.797	17.870	0.782	7850.6	4743.3	5.880	5.609	3.34		Clay	64.5			16.89	0.81	n.a.	n.a.	0.68	0.413	n.a.	n.a.	n.a.	n.a.	0.00	0.00
64.961	17.700	0.763	7870.3	4752.7	5.792	5.546	3.34		Clay	64.6			16.73	0.81	n.a.	n.a.	0.68	0.413	n.a.	n.a.	n.a.	n.a.	0.00	0.00
65.125	17.010	0.722	7890.0	4762.2	5.487	5.526	3.36		Clay	65.5			16.08	0.81	n.a.	n.a.	0.68	0.412	n.a.	n.a.	n.a.	n.a.	0.00	0.00
65.289	17.120	0.704	7909.6	4771.6	5.518	5.346	3.35		Clay	65.0			16.18	0.81	n.a.	n.a.	0.68	0.412	n.a.	n.a.	n.a.	n.a.	0.00	0.00
65.453	17.320	0.771	7929.3	4781.1	5.587	5.775	3.37		Clay	65.8			16.37	0.81	n.a.	n.a.	0.68	0.412	n.a.	n.a.	n.a.	n.a.	0.00	0.00
65.617	18.020	0.810	7949.0	4790.5	5.864	5.766	3.35		Clay	64.9			17.03	0.81	n.a.	n.a.	0.68	0.411	n.a.	n.a.	n.a.	n.a.	0.00	0.00
65.781	19.200	0.850	7968.7	4800.0	6.340	5.585	3.31		Clay	63.1			18.15	0.81	n.a.	n.a.	0.67	0.411	n.a.	n.a.	n.a.	n.a.	0.00	0.00
65.945	20.190	0.861	7988.4	4809.4	6.735	5.317	3.28		Clay	61.5			19.08	0.81	n.a.	n.a.	0.67	0.411	n.a.	n.a.	n.a.	n.a.	0.00	0.00
66.109	21.020	0.876	8008.1	4818.9	7.062	5.150	3.26		Clay	60.3			19.87	0.80	n.a.	n.a.	0.67	0.410	n.a.	n.a.	n.a.	n.a.	0.00	0.00
66.273	21.570	0.923	8027.8	4828.3	7.272	5.255	3.25		Clay	60.0			20.39	0.80	n.a.	n.a.	0.67	0.410	n.a.	n.a.	n.a.	n.a.	0.00	0.00
66.437	24.550	1.431	8047.4	4837.8	8.486	6.971	3.27		Clay	61.1			23.20	0.80	n.a.	n.a.	0.67	0.409	n.a.	n.a.	n.a.	n.a.	0.00	0.00
66.601	31.880	1.921	8067.1	4847.2	11.490	6.899	3.17		Clay	56.2			30.13	0.80	n.a.	n.a.	0.67	0.409	n.a.	n.a.	n.a.	n.a.	0.00	0.00
66.765	126.470	1.708	8086.8	4856.7	76.380	1.395	2.09		Sand	19.1	402.48	1.45	583.60	0.80	468.73	618.57	0.67	0.409	0.751	2.000	1.759	4.30	0.00	
66.929	189.160	1.909	8106.5	4866.1	115.373	1.031	1.87		Sand	14.3	402.48	1.45	583.60	0.80	468.49	572.97	0.67	0.408	0.750	2.000	1.757	4.30	0.00	
67.093	213.170	2.392	8126.2	4875.6	130.205	1.144	1.86		Sand	14.1	402.48	1.45	583.60	0.80	468.25	570.51	0.67	0.408	0.750	2.000	1.756	4.31	0.00	
67.257	228.430	1.994	8145.9	4885.0	139.566	0.889	1.77		Sand	12.3	402.48	1.45	583.60	0.80	468.01	544.48	0.67	0.408	0.749	2.000	1.755	4.31	0.00	
67.421	301.010	2.180	8165.6	4894.5	184.531	0.734	1.62		Sand	9.8	402.48	1.45	583.60	0.80	467.77	505.00	0.67	0.407	0.748	2.000	1.753	4.31	0.00	
67.585	375.550	2.973	8185.2	4903.9	230.627	0.800	1.58		Sand	9.2	402.48	1.45	583.60	0.80	467.53	494.58	0.67	0.407	0.748	2.000	1.752	4.31	0.00	
67.749	425.820	3.819	8204.9	4913.4	261.580	0.906	1.58		Sand	9.2		1.45	583.59	0.80	467.29	494.69	0.66	0.406	0.747	2.000	1.751	4.31	0.00	
67.913	468.360	3.875	8224.6	4922.8	287.684	0.835	1.52		Sand	8.4		1.45	641.89	0.80	513.71	532.14	0.66	0.406	0.747	2.000	1.749	4.31	0.00	
68.077	448.650	3.273	8244.3	4932.3	275.200	0.736	1.50		Sand	8.0	442.68	1.45	641.89	0.80	513.45	527.27	0.66	0.406	0.746	2.000	1.748	4.31	0.00	
68.241	299.170	2.997	8264.0	4941.7	182.478	1.016	1.72		Sand	11.5	442.68	1.45	641.89	0.80	513.19	582.45	0.66	0.405	0.746	2.000	1.747	4.31	0.00	
68.406	115.200	2.815	8283.7	4951.2	68.623	2.535	2.30		Sand	24.5	442.68	1.45	641.89	0.80	512.93	701.38	0.66	0.405	0.745	2.000	1.745	4.31	0.00	
68.570	56.250	2.408	8303.3	4960.6	21.005	4.621	2.86		Clay	42.9			53.17	0.80	n.a.	n.a.	0.66	0.405	n.a.	n.a.	n.a.	n.a.	0.00	0.00
68.734	34.060	1.857	8323.0	4970.1	12.031	6.211	3.12		Clay	54.2			32.19	0.80	n.a.	n.a.	0.66	0.404	n.a.	n.a.	n.a.	n.a.	0.00	0.00
68.898	28.570	1.527	8342.7	4979.5	9.800	6.256	3.20		Clay	57.4			27.00	0.80	n.a.	n.a.	0.66	0.404	n.a.	n.a.	n.a.	n.a.	0.00	0.00
69.062	21.280	1.202	8362.4	4989.0	6.855	7.027	3.35		Clay	64.8			20.11	0.80	n.a.	n.a.	0.66	0.403	n.a.	n.a.	n.a.	n.a.	0.00	0.00
69.226	19.290	0.997	8382.1	4998.4	6.042	6.603	3.37		Clay	66.2			18.23	0.80	n.a.	n.a.	0.66	0.403	n.a.	n.a.	n.a.	n.a.	0.00	0.00
69.390	18.410	0.911	8401.8	5007.9	5.675	6.414	3.39		Clay	66.9			17.40	0.80	n.a.	n.a.	0.66	0.403	n.a.	n.a.	n.a.	n.a.	0.00	0.00
69.554	18.510	0.793	8421.5	5017.3	5.700	5.543	3.35		Clay	64.9			17.50	0.80	n.a.	n.a.	0.66	0.402	n.a.	n.a.	n.a.	n.a.	0.00	0.00
69.718	19.020	0.734	8441.1	5026.7	5.888	4.959	3.31		Clay	62.9			17.98	0.80	n.a.	n.a.	0.66	0.402	n.a.	n.a.	n.a.	n.a.	0.00	0.00
69.882	19.250	0.695	8460.8	5036.2	5.965	4.629	3.29		Clay	61.9			18.19	0.80	n.a.	n.a.	0.66	0.402	n.a.	n.a.	n.a.	n.a.	0.00	0.00
70.046	18.420	0.673	8480.5	5045.6	5.621	4.746	3.32		Clay	63.2			17.41	0.80	n.a.	n.a.	0.65	0.401	n.a.	n.a.	n.a.	n.a.	0.00	0.00
70.210	17.280	0.592	8500.2	5055.1	5.155	4.542	3.34		Clay	64.2			16.33	0.79	n.a.	n.a.	0.65	0.401	n.a.	n.a.	n.a.	n.a.	0.00	0.00
70.374	16.100	0.519	8519.9	5064.5	4.676	4.380	3.36		Clay	65.5			15.22	0.79	n.a.	n.a.	0.65	0.401	n.a.	n.a.	n.a.	n.a.	0.00	0.00
70.538	16.010	0.506	8539.6	5074.0	4.628	4.306	3.36		Clay	65.5			15.13	0.79	n.a.	n.a.	0.65	0.400	n.a.	n.a.	n.a.	n.a.	0.00	0.00
70.702	15.760	0.513	8559.3	5083.4	4.517	4.466	3.38		Clay	66.4			14.90	0.79	n.a.	n.a.	0.65	0.400	n.a.	n.a.	n.a.	n.a.	0.00	0.00
70.866	16.900	0.553	8579.9	5092.9	4.952	4.381	3.34		Clay	64.5			15.97	0.79	n.a.	n.a.	0.65	0.399	n.a.	n.a.	n.a.	n.a.	0.00	0.00
71.030	18.650	0.568	8598.6	5102.3	5.625	3.961	3.27		Clay	61.0			17.63	0.79	n.a.	n.a.	0.65	0.399	n.a.	n.a.	n.a.	n.a.	0.00	0.00
71.194	19.930	0.546	8618.3	5111.8	6.112	3.494	3.21		Clay	58.1			18.84	0.79	n.a.	n.a.	0.65	0.399	n.a.	n.a.	n.a.	n.a.	0.00	0.00
71.358	19.450	0.507	8638.0	5121.2	5.909	3.352	3.21		Clay	58.3			18.38	0.79	n.a.	n.a.	0.65	0.398	n.a.	n.a.	n.a.	n.a.	0.00	0.00
71.522	17.770	0.501	8657.7	5130.7	5.240	3.727	3.28		Clay	61.6			16.80	0.79	n.a.	n.a.	0.65	0.398	n.a.	n.a.	n.a.	n.a.	0.00	0.00
71.686	17.590	0.486	8677.4	5140.1	5.156	3.668	3.28		Clay	61.7			16.63	0.79	n.a.	n.a.	0.65	0.398	n.a.	n.a.	n.a.	n.a.	0.00	0.00
71.850	18.150	0.503	8697.0	5149.6	5.360	3.642	3.27		Clay	60.9			17.16	0.79	n.a.	n.a.	0.65	0.397	n.a.	n.a.	n.a.	n.a.	0.00	0.00
72.014	18.800	0.533	8716.7	5159.0	5.599	3.691	3.26		Clay	60.3			17.77	0.79	n.a.	n.a.	0.65	0.397	n.a.	n.a.	n.a.	n.a.	0.00	0.00
72.178	20.520																							



CPT No. 4

PGA ( $A_{max}$ ) 0.50

Total Settlement: 0.00 (Inches)

Depth (ft)	$q_c$ (tsf)	$f_s$ (tsf)	$\sigma_{vc}$ (psf)	Insitu $\sigma'_{vc}$ (psf)	Q	F (%)	$I_c$	Layer "Plastic" $PI > 7$	Flag Soil Type	Fines (%)	$q_c$ -N near interfaces (soft layer)	Thin Layer Factor ( $K_{li}$ )	Interpreted $q_c$ -N	$C_N$	$q_{c1N}$	$q_{c1N-CS}$	Stress Reduction Coeff, $r_d$	CSR	$K_\sigma$ for Sand	$CRR_M=7.5, \sigma'_{vc} = 1 \text{ atm}$	CRR	Factor of Safety (CRR/CSR)	Vertical Strain $\epsilon_v$	Settlement (Inches)
73.655	30.800	1.127	8913.6	5253.5	10.029	4.279	3.09		Clay	52.4			29.11	0.79	n.a.	n.a.	0.64	0.393	n.a.	n.a.	n.a.	n.a.	0.00	0.00
73.819	32.140	1.126	8933.3	5263.0	10.516	4.070	3.06		Clay	51.1			30.38	0.79	n.a.	n.a.	0.64	0.393	n.a.	n.a.	n.a.	n.a.	0.00	0.00
73.983	30.820	1.101	8953.0	5272.4	9.993	4.180	3.08		Clay	52.2			29.13	0.79	n.a.	n.a.	0.64	0.393	n.a.	n.a.	n.a.	n.a.	0.00	0.00
74.147	28.810	0.984	8972.6	5281.9	9.210	4.044	3.10		Clay	53.1			27.23	0.79	n.a.	n.a.	0.64	0.392	n.a.	n.a.	n.a.	n.a.	0.00	0.00
74.311	25.350	0.921	8992.3	5291.3	7.882	4.415	3.18		Clay	56.6			23.96	0.79	n.a.	n.a.	0.64	0.392	n.a.	n.a.	n.a.	n.a.	0.00	0.00
74.475	21.990	0.835	9012.0	5300.8	6.597	4.775	3.26		Clay	60.5			20.78	0.78	n.a.	n.a.	0.64	0.392	n.a.	n.a.	n.a.	n.a.	0.00	0.00
74.639	22.200	0.843	9031.7	5310.2	6.660	4.767	3.26		Clay	60.3			20.98	0.78	n.a.	n.a.	0.63	0.391	n.a.	n.a.	n.a.	n.a.	0.00	0.00
74.803	26.490	1.039	9051.4	5319.7	8.258	4.730	3.18		Clay	56.7			25.04	0.78	n.a.	n.a.	0.63	0.391	n.a.	n.a.	n.a.	n.a.	0.00	0.00
74.967	35.220	1.374	9071.1	5329.1	11.516	4.478	3.05		Clay	50.9			33.29	0.78	n.a.	n.a.	0.63	0.391	n.a.	n.a.	n.a.	n.a.	0.00	0.00
75.131	39.710	1.769	9090.7	5338.6	13.174	5.031	3.04		Clay	50.2			37.53	0.78	n.a.	n.a.	0.63	0.390	n.a.	n.a.	n.a.	n.a.	0.00	0.00

Depth (ft)	q <sub>c</sub> (tsf)	f <sub>s</sub> (tsf)	σ <sub>vc</sub> (psf)	Insitu σ <sub>vc</sub> (psf)	Q	F (%)	lc	Layer "Plastic" PI > 7	Flag Soil Type	Fines (%)	q <sub>c</sub> N near interfaces (soft layer)	Thin Layer Factor (K <sub>ti</sub> )	Interpreted q <sub>c</sub> N	C <sub>N</sub>	q <sub>c</sub> 1N	q <sub>c</sub> 1N-CS	Stress Reduction Coeff. r <sub>d</sub>	CSR	K <sub>σ</sub> for Sand	CRR <sub>M=7.5</sub> σ <sub>vc</sub> = 1 atm	CRR	Factor of Safety (CRR/CSR)	Vertical Strain ε <sub>v</sub>	Settlement (Inches)
0.164	13.020	0.471	20.5	20.5	124.913	3.623	2.25		Unsaturated	23.0			12.31	1.70	20.92	53.68	1.00	0.325	1.100	n.a.	n.a.	n.a.	0.00	0.00
0.328	22.920	0.943	41.0	41.0	155.471	4.116	2.24		Unsaturated	22.7			21.66	1.70	36.83	74.18	1.00	0.325	1.100	n.a.	n.a.	n.a.	0.00	0.00
0.492	28.080	1.586	61.5	61.5	155.489	5.656	2.35		Unsaturated	25.8			26.54	1.70	45.12	87.34	1.00	0.325	1.100	n.a.	n.a.	n.a.	0.00	0.00
0.656	34.910	1.979	82.0	82.0	167.398	5.674	2.33		Unsaturated	25.4			33.00	1.70	56.09	101.53	1.00	0.325	1.100	n.a.	n.a.	n.a.	0.00	0.00
0.820	43.960	2.927	102.5	102.5	188.541	6.667	2.37		Unsaturated	26.3			41.55	1.70	70.64	121.38	1.00	0.325	1.100	n.a.	n.a.	n.a.	0.00	0.00
0.984	117.080	3.289	123.0	123.0	458.689	2.811	1.85		Unsaturated	13.9			110.66	1.70	188.12	237.63	1.00	0.325	1.100	n.a.	n.a.	n.a.	0.00	0.00
1.148	179.960	3.808	143.5	143.5	652.820	2.117	1.68		Unsaturated	10.8			170.09	1.70	289.16	324.47	1.00	0.325	1.100	n.a.	n.a.	n.a.	0.00	0.00
1.312	190.320	3.128	164.0	164.0	645.791	1.644	1.58		Unsaturated	9.2			179.89	1.70	305.81	325.46	1.00	0.325	1.100	n.a.	n.a.	n.a.	0.00	0.00
1.476	189.800	2.837	184.5	184.5	607.160	1.496	1.55		Unsaturated	8.8			179.40	1.70	304.97	320.83	1.00	0.325	1.100	n.a.	n.a.	n.a.	0.00	0.00
1.640	163.860	2.701	205.1	205.1	497.211	1.649	1.63		Unsaturated	10.0			154.88	1.70	263.29	288.50	1.00	0.325	1.100	n.a.	n.a.	n.a.	0.00	0.00
1.804	159.120	2.799	225.6	225.6	460.320	1.760	1.67		Unsaturated	10.7			150.40	1.70	255.67	286.88	1.00	0.325	1.100	n.a.	n.a.	n.a.	0.00	0.00
1.969	113.110	3.248	246.1	246.1	313.168	2.875	1.94		Unsaturated	15.7			106.91	1.70	181.75	240.17	1.00	0.325	1.100	n.a.	n.a.	n.a.	0.00	0.00
2.133	65.720	3.123	266.6	266.6	174.656	4.761	2.26		Unsaturated	23.3			62.12	1.70	105.60	164.63	1.00	0.325	1.100	n.a.	n.a.	n.a.	0.00	0.00
2.297	44.220	2.860	287.1	287.1	113.105	6.489	2.48		Unsaturated	29.6			41.80	1.70	71.05	123.67	1.00	0.325	1.100	n.a.	n.a.	n.a.	0.00	0.00
2.461	36.780	2.182	307.6	307.6	90.800	5.957	2.50		Unsaturated	30.4			34.76	1.70	59.10	108.02	1.00	0.325	1.100	n.a.	n.a.	n.a.	0.00	0.00
2.625	35.640	1.896	328.1	328.1	85.156	5.344	2.48		Unsaturated	29.8			33.69	1.70	57.27	105.35	1.00	0.325	1.100	n.a.	n.a.	n.a.	0.00	0.00
2.789	35.450	1.956	348.6	348.6	82.147	5.545	2.51		Unsaturated	30.5			33.51	1.70	56.96	105.18	1.00	0.325	1.100	n.a.	n.a.	n.a.	0.00	0.00
2.953	31.970	2.009	369.1	369.1	71.934	6.321	2.59		Unsaturated	33.1			30.22	1.70	51.37	98.42	1.00	0.324	1.100	n.a.	n.a.	n.a.	0.00	0.00
3.117	28.850	1.831	389.6	389.6	88.541	6.389	2.53		Unsaturated	31.4			27.27	1.70	46.36	91.28	1.00	0.324	1.100	n.a.	n.a.	n.a.	0.00	0.00
3.281	26.780	1.669	410.1	410.1	79.218	6.280	2.56		Unsaturated	32.2			25.31	1.70	43.03	87.02	1.00	0.324	1.100	n.a.	n.a.	n.a.	0.00	0.00
3.445	23.180	1.516	430.6	430.6	66.157	6.602	2.62		Unsaturated	34.4			21.91	1.70	37.25	79.70	1.00	0.324	1.100	n.a.	n.a.	n.a.	0.00	0.00
3.609	22.900	1.386	451.1	451.1	63.228	6.111	2.61		Unsaturated	33.9			21.64	1.70	36.80	79.02	1.00	0.324	1.100	n.a.	n.a.	n.a.	0.00	0.00
3.773	23.070	1.383	471.6	471.6	61.723	6.056	2.61		Unsaturated	34.0			21.81	1.70	37.07	79.41	1.00	0.324	1.100	n.a.	n.a.	n.a.	0.00	0.00
3.937	22.590	1.394	492.1	492.1	58.625	6.237	2.64		Unsaturated	34.9			21.35	1.70	36.30	78.50	0.99	0.323	1.100	n.a.	n.a.	n.a.	0.00	0.00
4.101	22.280	1.374	512.6	512.6	56.157	6.240	2.65		Unsaturated	35.3			21.06	1.70	35.80	77.90	0.99	0.323	1.100	n.a.	n.a.	n.a.	0.00	0.00
4.265	21.910	1.359	533.1	533.1	53.693	6.280	2.66		Unsaturated	35.8			20.71	1.70	35.21	77.17	0.99	0.323	1.100	n.a.	n.a.	n.a.	0.00	0.00
4.429	24.030	1.422	553.6	553.6	57.390	5.985	2.63		Unsaturated	34.6			22.71	1.70	38.61	81.57	0.99	0.323	1.100	n.a.	n.a.	n.a.	0.00	0.00
4.593	26.010	1.513	574.1	574.1	60.587	5.880	2.61		Unsaturated	33.9			24.58	1.70	41.79	85.72	0.99	0.323	1.100	n.a.	n.a.	n.a.	0.00	0.00
4.757	28.470	1.561	594.7	594.7	64.747	5.542	2.57		Unsaturated	32.6			26.91	1.70	45.75	90.76	0.99	0.322	1.100	n.a.	n.a.	n.a.	0.00	0.00
4.921	28.530	1.601	615.2	615.2	63.340	5.674	2.58		Unsaturated	33.1			26.97	1.70	45.84	90.99	0.99	0.322	1.100	n.a.	n.a.	n.a.	0.00	0.00
5.085	26.470	1.589	635.7	635.7	57.362	6.075	2.63		Unsaturated	34.8			25.02	1.70	42.53	86.87	0.99	0.322	1.100	n.a.	n.a.	n.a.	0.00	0.00
5.249	24.360	1.440	656.2	656.2	51.553	5.990	2.66		Unsaturated	35.7			23.02	1.70	39.14	82.45	0.99	0.322	1.100	n.a.	n.a.	n.a.	0.00	0.00
5.413	24.050	1.445	676.7	676.7	49.782	6.096	2.68		Unsaturated	36.2			22.73	1.70	38.64	81.85	0.99	0.322	1.100	n.a.	n.a.	n.a.	0.00	0.00
5.577	23.660	1.411	697.2	697.2	47.930	6.055	2.69		Unsaturated	36.5			22.36	1.70	38.02	81.05	0.99	0.321	1.100	n.a.	n.a.	n.a.	0.00	0.00
5.741	24.430	1.374	717.7	717.7	48.497	5.709	2.66		Unsaturated	35.7			23.09	1.70	39.25	82.61	0.99	0.321	1.100	n.a.	n.a.	n.a.	0.00	0.00
5.906	26.180	1.352	738.2	738.2	50.987	5.238	2.62		Unsaturated	34.3			24.74	1.70	42.07	86.16	0.99	0.321	1.100	n.a.	n.a.	n.a.	0.00	0.00
6.070	22.320	1.281	758.7	758.7	57.838	5.839	2.62		Unsaturated	34.2			21.10	1.70	35.86	77.82	0.99	0.321	1.092	n.a.	n.a.	n.a.	0.00	0.00
6.234	22.700	1.292	779.2	779.2	57.265	5.790	2.62		Unsaturated	34.2			21.46	1.70	36.47	78.64	0.99	0.321	1.090	n.a.	n.a.	n.a.	0.00	0.00
6.398	26.200	1.518	799.7	799.7	48.189	5.884	2.67		Unsaturated	36.1			24.76	1.68	41.54	85.74	0.99	0.321	1.093	n.a.	n.a.	n.a.	0.00	0.00
6.562	22.680	1.499	820.2	820.2	54.303	6.732	2.68		Clay	36.5			21.44	1.28	n.a.	n.a.	0.99	0.322	n.a.	n.a.	n.a.	0.00	0.00	
6.726	18.150	1.169	840.7	840.7	42.178	6.594	2.75		Clay	38.8			17.16	1.28	n.a.	n.a.	0.99	0.326	n.a.	n.a.	n.a.	0.00	0.00	
6.890	17.520	0.823	861.2	861.2	39.686	4.815	2.67		Clay	35.9			16.56	1.27	n.a.	n.a.	0.98	0.329	n.a.	n.a.	n.a.	0.00	0.00	
7.054	15.370	0.707	881.7	881.7	33.863	4.734	2.71		Clay	37.5			14.53	1.26	n.a.	n.a.	0.98	0.333	n.a.	n.a.	n.a.	0.00	0.00	
7.218	15.680	0.661	902.2	902.2	33.758	4.341	2.69		Clay	36.6			14.82	1.25	n.a.	n.a.	0.98	0.336	n.a.	n.a.	n.a.	0.00	0.00	
7.382	14.020	0.686	922.7	922.7	29.388	5.058	2.78		Clay	39.8			13.25	1.24	n.a.	n.a.	0.98	0.340	n.a.	n.a.	n.a.	0.00	0.00	
7.546	16.110	0.866	943.2	943.2	33.159	5.536	2.77		Clay	39.5			15.23	1.24	n.a.	n.a.	0.98	0.343	n.a.	n.a.	n.a.	0.00	0.00	
7.710	19.080	1.110	963.7	963.7	38.595	5.970	2.74		Clay	38.6			18.03	1.23	n.a.	n.a.	0.98	0.346	n.a.	n.a.	n.a.	0.00	0.00	
7.874	18.240	1.291	984.3	984.3	36.064	7.272	2.83		Clay	41.8			17.24	1.22	n.a.	n.a.	0.98	0.349	n.a.	n.a.	n.a.	0.00	0.00	
8.038	17.670	1.302	1004.8	1004.8	34.173	7.586	2.86		Clay	42.9			16.70	1.22	n.a.	n.a.	0.98	0.352	n.a.	n.a.	n.a.	0.00	0.00	
8.202	18.350	1.270	1025.3	1025.3	34.796	7.119	2.83		Clay	41.9			17.34	1.21	n.a.	n.a.	0.98	0.355	n.a.	n.a.	n.a.	0.00	0.00	
8.366	16.030	1.157	1045.8	1045.8	29.657	7.464	2.89		Clay	44.3			15.15	1.20	n.a.	n.a.	0.98	0.358	n.a.	n.a.	n.a.	0.00	0.00	
8.530	12.850	0.928	1066.3	1066.3	23.103	7.532	2.97		Clay	47.5			12.15	1.20	n.a.	n.a.	0.98	0.361	n.a.	n.a.	n.a.	0.00	0.00	
8.694	14.820	0.893	1086.8	1086.8	26.273	6.254	2.88		Clay	43.6			14.01	1.19	n.a.	n.a.	0.98	0.364	n.a.	n.a.	n.a.	0.00	0.00	
8.858	15.150	0.991	1107.3	1107.3	26.364	6.787	2.90		Clay	44.6			14.32	1.19	n.a.	n.a.	0.98	0.367	n.a.	n.a.	n.a.	0.00	0.00	
9.022	14.660	1.025	1127.8	1127.8	24.998	7.269	2.94		Clay	46.1			13.86	1.18	n.a.	n.a.	0.98	0.369	n.a.	n.a.	n.a.	0.00	0.00	
9.186	15.480																							

Depth (ft)	q <sub>c</sub> (tsf)	f <sub>s</sub> (tsf)	σ <sub>vc</sub> (psf)	In situ σ'vc (psf)	Q	F (%)	lc	Layer "Plastic" PI > 7	Flag Soil Type	Fines (%)	q <sub>cN</sub> near interfaces (soft layer)	Thin Layer Factor (K <sub>tl</sub> )	Interpreted q <sub>cN</sub>	C <sub>N</sub>	q <sub>c1N</sub>	q <sub>c1N-CS</sub>	Stress Reduction Coeff, r <sub>d</sub>	CSR	K <sub>σ</sub> for Sand	CRRM=7.5, σ'vc = 1 atm	CRR	Factor of Safety (CRR/CSR)	Vertical Strain ε <sub>v</sub>	Settlement (Inches)
10.663	13.800	0.917	1332.8	1332.8	19.708	6.985	3.00		Clay	48.7			13.04	1.13	n.a.	n.a.	0.97	0.393	n.a.	n.a.	n.a.	n.a.	0.00	0.00
10.827	14.020	0.854	1353.3	1353.3	19.719	6.397	2.97		Clay	47.6			13.25	1.13	n.a.	n.a.	0.97	0.395	n.a.	n.a.	n.a.	n.a.	0.00	0.00
10.991	13.630	0.781	1373.9	1373.9	18.842	6.036	2.97		Clay	47.5			12.88	1.12	n.a.	n.a.	0.97	0.397	n.a.	n.a.	n.a.	n.a.	0.00	0.00
11.155	13.950	0.861	1394.4	1394.4	19.009	6.493	2.99		Clay	48.2			13.19	1.12	n.a.	n.a.	0.97	0.399	n.a.	n.a.	n.a.	n.a.	0.00	0.00
11.319	14.990	0.994	1414.9	1414.9	20.189	6.961	2.99		Clay	48.3			14.17	1.11	n.a.	n.a.	0.97	0.401	n.a.	n.a.	n.a.	n.a.	0.00	0.00
11.483	14.760	1.008	1435.4	1435.4	19.566	7.175	3.01		Clay	49.1			13.95	1.11	n.a.	n.a.	0.97	0.403	n.a.	n.a.	n.a.	n.a.	0.00	0.00
11.647	14.830	1.051	1455.9	1455.9	19.373	7.452	3.02		Clay	49.7			14.02	1.10	n.a.	n.a.	0.97	0.405	n.a.	n.a.	n.a.	n.a.	0.00	0.00
11.811	15.170	1.038	1476.4	1476.4	19.550	7.194	3.01		Clay	49.1			14.34	1.10	n.a.	n.a.	0.96	0.406	n.a.	n.a.	n.a.	n.a.	0.00	0.00
11.975	14.090	0.958	1496.9	1496.9	17.826	7.178	3.04		Clay	50.4			13.32	1.10	n.a.	n.a.	0.96	0.408	n.a.	n.a.	n.a.	n.a.	0.00	0.00
12.139	12.200	0.810	1517.4	1517.4	15.080	7.075	3.09		Clay	52.5			11.53	1.09	n.a.	n.a.	0.96	0.410	n.a.	n.a.	n.a.	n.a.	0.00	0.00
12.303	9.570	0.590	1537.9	1537.9	11.446	6.705	3.16		Clay	55.9			9.05	1.09	n.a.	n.a.	0.96	0.412	n.a.	n.a.	n.a.	n.a.	0.00	0.00
12.467	8.430	0.497	1558.4	1558.4	9.819	6.490	3.20		Clay	57.8			7.97	1.08	n.a.	n.a.	0.96	0.413	n.a.	n.a.	n.a.	n.a.	0.00	0.00
12.631	8.460	0.557	1578.9	1578.9	9.716	7.264	3.24		Clay	59.5			8.00	1.08	n.a.	n.a.	0.96	0.415	n.a.	n.a.	n.a.	n.a.	0.00	0.00
12.795	8.880	0.598	1599.4	1599.4	10.104	7.398	3.23		Clay	59.1			8.39	1.08	n.a.	n.a.	0.96	0.416	n.a.	n.a.	n.a.	n.a.	0.00	0.00
12.959	19.530	0.529	1619.9	1619.9	23.112	2.825	2.69		Clay	36.6			18.46	1.07	n.a.	n.a.	0.96	0.418	n.a.	n.a.	n.a.	n.a.	0.00	0.00
13.123	28.420	0.435	1640.4	1640.4	29.628	1.577	2.45		Sand	28.8		1.8	48.35	1.13	54.84	101.71	0.96	0.419	1.027	0.145	0.175	0.42	0.03	0.06
13.287	28.160	0.389	1660.9	1660.9	29.156	1.424	2.43		Sand	28.2		1.8	47.91	1.13	54.04	100.39	0.96	0.421	1.026	0.143	0.172	0.41	0.03	0.06
13.451	27.680	0.410	1681.4	1681.4	28.458	1.526	2.46		Sand	29.0		1.8	47.09	1.12	52.83	99.11	0.96	0.422	1.024	0.141	0.169	0.40	0.03	0.06
13.615	26.080	0.454	1701.9	1701.9	26.589	1.800	2.52		Sand	31.0		1.8	44.37	1.12	49.56	95.46	0.96	0.424	1.022	0.135	0.162	0.38	0.03	0.07
13.780	17.660	0.477	1722.4	1722.4	19.506	2.842	2.75		Clay	38.8			16.69	1.06	n.a.	n.a.	0.96	0.425	n.a.	n.a.	n.a.	n.a.	0.00	0.00
13.944	10.580	0.495	1742.9	1742.9	11.140	5.099	3.10		Clay	52.9			10.00	1.05	n.a.	n.a.	0.96	0.427	n.a.	n.a.	n.a.	n.a.	0.00	0.00
14.108	9.380	0.516	1763.5	1763.5	9.638	6.067	3.19		Clay	57.3			8.87	1.05	n.a.	n.a.	0.95	0.428	n.a.	n.a.	n.a.	n.a.	0.00	0.00
14.272	9.080	0.573	1784.0	1784.0	9.180	6.993	3.25		Clay	59.3			8.58	1.05	n.a.	n.a.	0.95	0.429	n.a.	n.a.	n.a.	n.a.	0.00	0.00
14.436	9.250	0.636	1804.5	1804.5	9.252	7.624	3.27		Clay	60.9			8.74	1.04	n.a.	n.a.	0.95	0.430	n.a.	n.a.	n.a.	n.a.	0.00	0.00
14.600	9.250	0.650	1825.0	1825.0	9.137	7.797	3.28		Clay	61.4			8.74	1.04	n.a.	n.a.	0.95	0.432	n.a.	n.a.	n.a.	n.a.	0.00	0.00
14.764	9.670	0.685	1845.5	1845.5	9.480	7.830	3.27		Clay	60.9			9.14	1.04	n.a.	n.a.	0.95	0.433	n.a.	n.a.	n.a.	n.a.	0.00	0.00
14.928	10.190	0.800	1866.0	1866.0	9.922	8.639	3.28		Clay	61.5			9.63	1.03	n.a.	n.a.	0.95	0.434	n.a.	n.a.	n.a.	n.a.	0.00	0.00
15.092	10.390	0.811	1886.0	1886.0	10.048	8.584	3.28		Clay	61.2			9.82	1.03	n.a.	n.a.	0.95	0.435	n.a.	n.a.	n.a.	n.a.	0.00	0.00
15.256	10.660	0.824	1905.7	1889.7	10.274	8.484	3.26		Clay	60.7			10.08	1.03	n.a.	n.a.	0.95	0.436	n.a.	n.a.	n.a.	n.a.	0.00	0.00
15.420	10.990	0.840	1925.4	1899.2	10.560	8.379	3.25		Clay	60.1			10.39	1.03	n.a.	n.a.	0.95	0.438	n.a.	n.a.	n.a.	n.a.	0.00	0.00
15.584	11.320	0.822	1945.1	1908.6	10.843	7.941	3.23		Clay	59.0			10.70	1.03	n.a.	n.a.	0.95	0.439	n.a.	n.a.	n.a.	n.a.	0.00	0.00
15.748	11.280	0.808	1964.8	1918.1	10.737	7.847	3.23		Clay	58.9			10.66	1.03	n.a.	n.a.	0.95	0.440	n.a.	n.a.	n.a.	n.a.	0.00	0.00
15.912	11.780	0.819	1984.4	1927.5	11.193	7.596	3.21		Clay	57.9			11.13	1.02	n.a.	n.a.	0.95	0.441	n.a.	n.a.	n.a.	n.a.	0.00	0.00
16.076	12.540	0.848	2004.1	1937.0	11.913	7.345	3.18		Clay	56.5			11.85	1.02	n.a.	n.a.	0.95	0.442	n.a.	n.a.	n.a.	n.a.	0.00	0.00
16.240	13.610	0.906	2023.8	1946.4	12.945	7.193	3.14		Clay	54.9			12.86	1.02	n.a.	n.a.	0.94	0.443	n.a.	n.a.	n.a.	n.a.	0.00	0.00
16.404	14.240	0.958	2043.5	1955.9	13.516	7.249	3.13		Clay	54.4			13.46	1.02	n.a.	n.a.	0.94	0.444	n.a.	n.a.	n.a.	n.a.	0.00	0.00
16.568	14.440	0.959	2063.2	1965.3	13.645	7.155	3.12		Clay	54.1			13.65	1.02	n.a.	n.a.	0.94	0.445	n.a.	n.a.	n.a.	n.a.	0.00	0.00
16.732	14.340	0.971	2082.9	1974.8	13.468	7.299	3.13		Clay	54.6			13.55	1.02	n.a.	n.a.	0.94	0.446	n.a.	n.a.	n.a.	n.a.	0.00	0.00
16.896	13.980	0.946	2102.6	1984.2	13.031	7.320	3.15		Clay	55.1			13.21	1.02	n.a.	n.a.	0.94	0.447	n.a.	n.a.	n.a.	n.a.	0.00	0.00
17.060	13.300	0.907	2122.2	1993.7	12.278	7.407	3.17		Clay	56.1			12.57	1.02	n.a.	n.a.	0.94	0.447	n.a.	n.a.	n.a.	n.a.	0.00	0.00
17.224	12.770	0.875	2141.9	2003.1	11.681	7.477	3.19		Clay	57.0			12.07	1.01	n.a.	n.a.	0.94	0.448	n.a.	n.a.	n.a.	n.a.	0.00	0.00
17.388	12.780	0.874	2161.6	2012.6	11.626	7.474	3.19		Clay	57.1			12.08	1.01	n.a.	n.a.	0.94	0.449	n.a.	n.a.	n.a.	n.a.	0.00	0.00
17.552	12.140	0.864	2181.3	2022.0	10.929	7.817	3.22		Clay	58.6			11.47	1.01	n.a.	n.a.	0.94	0.450	n.a.	n.a.	n.a.	n.a.	0.00	0.00
17.717	11.200	0.830	2201.0	2031.5	9.943	8.216	3.27		Clay	60.8			10.59	1.01	n.a.	n.a.	0.94	0.451	n.a.	n.a.	n.a.	n.a.	0.00	0.00
17.881	9.440	0.738	2220.7	2040.9	8.163	8.860	3.35		Clay	65.1			8.92	1.01	n.a.	n.a.	0.94	0.452	n.a.	n.a.	n.a.	n.a.	0.00	0.00
18.045	8.180	0.616	2240.4	2050.4	6.886	8.728	3.41		Clay	67.7			7.73	1.01	n.a.	n.a.	0.94	0.452	n.a.	n.a.	n.a.	n.a.	0.00	0.00
18.209	7.340	0.458	2260.0	2059.8	6.030	7.369	3.40		Clay	67.7			7.94	1.01	n.a.	n.a.	0.93	0.453	n.a.	n.a.	n.a.	n.a.	0.00	0.00
18.373	8.130	0.530	2279.7	2069.3	6.756	7.582	3.37		Clay	66.1			7.68	1.01	n.a.	n.a.	0.93	0.454	n.a.	n.a.	n.a.	n.a.	0.00	0.00
18.537	10.220	0.616	2299.4	2078.7	8.727	6.790	3.26		Clay	60.3			9.66	1.00	n.a.	n.a.	0.93	0.455	n.a.	n.a.	n.a.	n.a.	0.00	0.00
18.701	10.060	0.620	2319.1	2088.2	8.525	6.965	3.27		Clay	61.0			9.51	1.00	n.a.	n.a.	0.93	0.455	n.a.	n.a.	n.a.	n.a.	0.00	0.00
18.865	9.610	0.602	2338.8	2097.6	8.048	7.131	3.30		Clay	62.3			9.08	1.00	n.a.	n.a.	0.93	0.456	n.a.	n.a.	n.a.	n.a.	0.00	0.00
19.029	8.920	0.533	2358.5	2107.1	7.347	6.882	3.32		Clay	63.3			8.43	1.00	n.a.	n.a.	0.93	0.457	n.a.	n.a.	n.a.	n.a.	0.00	0.00
19.193	8.200	0.465	2378.1	2116.5	6.625	6.625	3.34		Clay	64.6			7.75	1.00	n.a.	n.a.	0.93	0.457	n.a.	n.a.	n.a.	n.a.	0.00	0.00
19.357	7.750	0.429	2397.8	2126.0	6.163	6.541	3.37		Clay	65.7			7.33	1.00	n.a.	n.a.	0.93	0.458	n.a.	n.a.	n.a.	n.a.	0.00	0.00
19.521	7.830	0.409	2417.5	2135.4	6.201	6.182	3.35		Clay	64.8			7.40	1.00	n.a.	n.a.	0.93	0.459	n.a.	n.a.	n.a.	n.a.	0.00	0.00
19.685	8.070	0.392	2437.2	2144.9	6.389	5.723	3.32		Clay	63.3			7.63	1.00	n.a.	n.a.	0.93	0.459	n.a.	n.a.	n.a.	n.a.	0.00	0.00
19.849	8.160	0.394	2456.9	215																				

Depth (ft)	q <sub>c</sub> (tsf)	f <sub>s</sub> (tsf)	σ <sub>vc</sub> (psf)	In situ σ'vc (psf)	Q	F (%)	lc	Layer "Plastic" PI > 7	Flag Soil Type	Fines (%)	q <sub>c-N</sub> near interfaces (soft layer)	Thin Layer Factor (K <sub>tl</sub> )	Interpreted q <sub>c-N</sub>	C <sub>N</sub>	q <sub>c1N</sub>	q <sub>c1N-CS</sub>	Stress Reduction Coeff. r <sub>d</sub>	CSR	K <sub>σ</sub> for Sand	CRRM=7.5, σ'vc = 1 atm	CRR	Factor of Safety (CRR/CSR)	Vertical Strain ε <sub>v</sub>	Settlement (Inches)
21.161	9.890	0.460	2614.4	2229.9	7.698	5.364	3.24		Clay	59.3			9.35	0.99	n.a.	n.a.	0.92	0.464	n.a.	n.a.	n.a.	n.a.	0.00	0.00
21.325	10.080	0.492	2634.1	2239.3	7.826	5.616	3.24		Clay	59.6			9.53	0.99	n.a.	n.a.	0.92	0.465	n.a.	n.a.	n.a.	n.a.	0.00	0.00
21.490	11.590	0.797	2653.7	2248.8	9.128	7.765	3.28		Clay	61.4			10.95	0.98	n.a.	n.a.	0.92	0.465	n.a.	n.a.	n.a.	n.a.	0.00	0.00
21.654	15.200	1.020	2673.4	2258.2	12.278	7.354	3.17		Clay	56.0			14.37	0.98	n.a.	n.a.	0.92	0.465	n.a.	n.a.	n.a.	n.a.	0.00	0.00
21.818	18.000	1.087	2693.1	2267.7	14.688	6.524	3.07		Clay	51.9			17.01	0.98	n.a.	n.a.	0.92	0.466	n.a.	n.a.	n.a.	n.a.	0.00	0.00
21.982	16.560	1.044	2712.8	2277.1	13.353	6.867	3.12		Clay	53.9			15.65	0.98	n.a.	n.a.	0.92	0.466	n.a.	n.a.	n.a.	n.a.	0.00	0.00
22.146	13.520	0.812	2732.5	2286.6	10.630	6.681	3.19		Clay	57.0			12.78	0.98	n.a.	n.a.	0.91	0.467	n.a.	n.a.	n.a.	n.a.	0.00	0.00
22.310	12.550	0.644	2752.2	2296.0	9.733	5.760	3.18		Clay	56.5			11.86	0.98	n.a.	n.a.	0.91	0.467	n.a.	n.a.	n.a.	n.a.	0.00	0.00
22.474	11.910	0.595	2771.9	2305.5	9.130	5.654	3.19		Clay	57.2			11.26	0.98	n.a.	n.a.	0.91	0.467	n.a.	n.a.	n.a.	n.a.	0.00	0.00
22.638	11.660	0.603	2791.5	2314.9	8.868	5.874	3.21		Clay	58.2			11.02	0.98	n.a.	n.a.	0.91	0.468	n.a.	n.a.	n.a.	n.a.	0.00	0.00
22.802	10.570	0.619	2811.2	2324.4	7.885	6.752	3.29		Clay	61.9			9.99	0.98	n.a.	n.a.	0.91	0.468	n.a.	n.a.	n.a.	n.a.	0.00	0.00
22.966	9.340	0.604	2830.9	2333.8	6.791	7.618	3.37		Clay	66.1			8.83	0.97	n.a.	n.a.	0.91	0.469	n.a.	n.a.	n.a.	n.a.	0.00	0.00
23.130	8.750	0.541	2850.6	2343.3	6.252	7.391	3.39		Clay	67.1			8.27	0.97	n.a.	n.a.	0.91	0.469	n.a.	n.a.	n.a.	n.a.	0.00	0.00
23.294	8.120	0.496	2870.3	2352.7	5.683	7.423	3.43		Clay	68.9			7.67	0.97	n.a.	n.a.	0.91	0.469	n.a.	n.a.	n.a.	n.a.	0.00	0.00
23.458	7.650	0.474	2890.0	2362.2	5.254	7.631	3.46		Clay	70.7			7.23	0.97	n.a.	n.a.	0.91	0.470	n.a.	n.a.	n.a.	n.a.	0.00	0.00
23.622	7.440	0.480	2909.6	2371.6	5.047	8.018	3.49		Clay	72.1			7.03	0.97	n.a.	n.a.	0.91	0.470	n.a.	n.a.	n.a.	n.a.	0.00	0.00
23.786	7.490	0.493	2929.3	2381.1	5.061	8.174	3.49		Clay	72.3			7.08	0.97	n.a.	n.a.	0.91	0.470	n.a.	n.a.	n.a.	n.a.	0.00	0.00
23.950	7.470	0.485	2949.0	2390.5	5.016	8.081	3.49		Clay	72.3			7.06	0.97	n.a.	n.a.	0.91	0.470	n.a.	n.a.	n.a.	n.a.	0.00	0.00
24.114	7.820	0.448	2968.7	2400.0	5.280	7.070	3.44		Clay	69.5			7.39	0.97	n.a.	n.a.	0.90	0.471	n.a.	n.a.	n.a.	n.a.	0.00	0.00
24.278	7.940	0.392	2988.4	2409.4	5.350	6.088	3.40		Clay	67.3			7.50	0.97	n.a.	n.a.	0.90	0.471	n.a.	n.a.	n.a.	n.a.	0.00	0.00
24.442	7.120	0.368	3008.1	2418.9	4.643	6.547	3.46		Clay	70.8			6.73	0.97	n.a.	n.a.	0.90	0.471	n.a.	n.a.	n.a.	n.a.	0.00	0.00
24.606	7.000	0.352	3027.8	2428.3	4.518	6.411	3.47		Clay	71.1			6.62	0.96	n.a.	n.a.	0.90	0.472	n.a.	n.a.	n.a.	n.a.	0.00	0.00
24.770	7.610	0.378	3047.4	2437.8	4.993	6.212	3.43		Clay	68.8			7.19	0.96	n.a.	n.a.	0.90	0.472	n.a.	n.a.	n.a.	n.a.	0.00	0.00
24.934	7.210	0.398	3067.1	2447.2	4.639	7.017	3.48		Clay	71.8			6.81	0.96	n.a.	n.a.	0.90	0.472	n.a.	n.a.	n.a.	n.a.	0.00	0.00
25.098	7.970	0.471	3086.8	2456.7	5.232	7.335	3.45		Clay	70.2			7.53	0.96	n.a.	n.a.	0.90	0.472	n.a.	n.a.	n.a.	n.a.	0.00	0.00
25.262	8.550	0.510	3106.5	2466.1	5.674	7.289	3.42		Clay	68.6			8.08	0.96	n.a.	n.a.	0.90	0.472	n.a.	n.a.	n.a.	n.a.	0.00	0.00
25.427	8.400	0.518	3126.2	2475.6	5.524	7.578	3.44		Clay	69.7			7.94	0.96	n.a.	n.a.	0.90	0.473	n.a.	n.a.	n.a.	n.a.	0.00	0.00
25.591	8.520	0.508	3145.9	2485.0	5.591	7.315	3.43		Clay	68.9			8.05	0.96	n.a.	n.a.	0.90	0.473	n.a.	n.a.	n.a.	n.a.	0.00	0.00
25.755	8.510	0.558	3165.6	2494.5	5.554	8.048	3.46		Clay	70.4			8.04	0.96	n.a.	n.a.	0.90	0.473	n.a.	n.a.	n.a.	n.a.	0.00	0.00
25.919	8.700	0.595	3185.2	2503.9	5.677	8.367	3.46		Clay	70.6			8.22	0.96	n.a.	n.a.	0.89	0.473	n.a.	n.a.	n.a.	n.a.	0.00	0.00
26.083	8.870	0.582	3204.9	2513.4	5.783	8.014	3.44		Clay	69.6			8.38	0.96	n.a.	n.a.	0.89	0.473	n.a.	n.a.	n.a.	n.a.	0.00	0.00
26.247	8.430	0.542	3224.6	2522.8	5.405	7.948	3.46		Clay	70.7			7.97	0.95	n.a.	n.a.	0.89	0.474	n.a.	n.a.	n.a.	n.a.	0.00	0.00
26.411	8.220	0.513	3244.3	2532.3	5.211	7.777	3.47		Clay	71.1			7.77	0.95	n.a.	n.a.	0.89	0.474	n.a.	n.a.	n.a.	n.a.	0.00	0.00
26.575	8.290	0.577	3264.0	2541.7	5.239	8.665	3.50		Clay	72.5			7.84	0.95	n.a.	n.a.	0.89	0.474	n.a.	n.a.	n.a.	n.a.	0.00	0.00
26.739	9.100	0.655	3283.7	2551.2	5.847	8.781	3.46		Clay	70.7			8.60	0.95	n.a.	n.a.	0.89	0.474	n.a.	n.a.	n.a.	n.a.	0.00	0.00
26.903	9.250	0.668	3303.3	2560.6	5.935	8.793	3.46		Clay	70.5			8.74	0.95	n.a.	n.a.	0.89	0.474	n.a.	n.a.	n.a.	n.a.	0.00	0.00
27.067	9.000	0.678	3323.0	2570.1	5.711	9.232	3.48		Clay	71.9			8.51	0.95	n.a.	n.a.	0.89	0.474	n.a.	n.a.	n.a.	n.a.	0.00	0.00
27.231	9.230	0.649	3342.7	2579.5	5.861	8.588	3.46		Clay	70.4			8.72	0.95	n.a.	n.a.	0.89	0.474	n.a.	n.a.	n.a.	n.a.	0.00	0.00
27.395	8.890	0.595	3362.4	2589.0	5.569	8.254	3.46		Clay	70.7			8.40	0.95	n.a.	n.a.	0.89	0.474	n.a.	n.a.	n.a.	n.a.	0.00	0.00
27.559	8.190	0.567	3382.1	2598.4	5.002	8.720	3.51		Clay	73.5			7.74	0.95	n.a.	n.a.	0.89	0.475	n.a.	n.a.	n.a.	n.a.	0.00	0.00
27.723	8.610	0.556	3401.8	2607.9	5.299	8.040	3.47		Clay	71.2			8.14	0.95	n.a.	n.a.	0.88	0.475	n.a.	n.a.	n.a.	n.a.	0.00	0.00
27.887	9.160	0.618	3421.5	2617.3	5.692	8.291	3.46		Clay	70.4			8.66	0.95	n.a.	n.a.	0.88	0.475	n.a.	n.a.	n.a.	n.a.	0.00	0.00
28.051	9.390	0.649	3441.1	2626.7	5.839	8.460	3.45		Clay	70.2			8.88	0.94	n.a.	n.a.	0.88	0.475	n.a.	n.a.	n.a.	n.a.	0.00	0.00
28.215	10.020	0.654	3460.8	2636.2	6.289	7.894	3.41		Clay	67.9			9.47	0.94	n.a.	n.a.	0.88	0.475	n.a.	n.a.	n.a.	n.a.	0.00	0.00
28.379	10.370	0.636	3480.5	2645.6	6.524	7.364	3.38		Clay	66.3			9.80	0.94	n.a.	n.a.	0.88	0.475	n.a.	n.a.	n.a.	n.a.	0.00	0.00
28.543	9.780	0.593	3500.2	2655.1	6.049	7.386	3.40		Clay	67.7			9.24	0.94	n.a.	n.a.	0.88	0.475	n.a.	n.a.	n.a.	n.a.	0.00	0.00
28.707	9.890	0.570	3519.9	2664.5	6.102	7.005	3.39		Clay	66.8			9.35	0.94	n.a.	n.a.	0.88	0.475	n.a.	n.a.	n.a.	n.a.	0.00	0.00
28.871	9.790	0.578	3539.6	2674.0	5.999	7.206	3.40		Clay	67.5			9.25	0.94	n.a.	n.a.	0.88	0.475	n.a.	n.a.	n.a.	n.a.	0.00	0.00
29.035	10.490	0.607	3559.3	2683.4	6.492	6.971	3.36		Clay	65.6			9.91	0.94	n.a.	n.a.	0.88	0.475	n.a.	n.a.	n.a.	n.a.	0.00	0.00
29.199	11.840	0.619	3578.9	2692.9	7.464	6.154	3.28		Clay	61.6			11.19	0.94	n.a.	n.a.	0.88	0.475	n.a.	n.a.	n.a.	n.a.	0.00	0.00
29.364	10.970	0.651	3598.6	2702.3	6.787	7.099	3.35		Clay	65.1			10.37	0.94	n.a.	n.a.	0.88	0.475	n.a.	n.a.	n.a.	n.a.	0.00	0.00
29.528	10.630	0.621	3618.3	2711.8	6.506	7.037	3.37		Clay	65.7			10.05	0.94	n.a.	n.a.	0.87	0.475	n.a.	n.a.	n.a.	n.a.	0.00	0.00
29.692	10.480	0.645	3638.0	2721.2	6.365	7.445	3.39		Clay	66.9			9.91	0.94	n.a.	n.a.	0.87	0.475	n.a.	n.a.	n.a.	n.a.	0.00	0.00
29.856	12.610	0.665	3657.7	2730.7	7.896	6.166	3.26		Clay	60.7			11.92	0.93	n.a.	n.a.	0.87	0.475	n.a.	n.a.	n.a.	n.a.	0.00	0.00
30.020	13.160	0.643	3677.4	2740.1	8.263	5.675	3.23		Clay	58.9			12.44	0.93	n.a.	n.a.	0.87	0.475	n.a.	n.a.	n.a.	n.a.	0.00	0.00
30.184	12.260	0.602	3697.0	2749.6	7.573	5.778	3.26		Clay	60.6			11.59	0.93	n.a.	n.a.	0.87	0.475	n.a.	n.a.	n.a.	n.a.	0.00	0.00
30.348	10.750	0.517	3716.7	2759.0	6.445	5.814	3.32		Clay	63.4			10.16	0.93	n.a.	n.a.	0.87	0.475	n.a.	n.a.	n.a.	n.a.	0.00	0.00
30.512																								

Depth (ft)	q <sub>c</sub> (tsf)	f <sub>s</sub> (tsf)	σ <sub>vc</sub> (psf)	In situ σ' <sub>vc</sub> (psf)	Q	F (%)	l <sub>c</sub>	Layer "Plastic" PI > 7	Flag Soil Type	Fines (%)	q <sub>c-N</sub> near interfaces (soft layer)	Thin Layer Factor (K <sub>tl</sub> )	Interpreted q <sub>c-N</sub>	C <sub>N</sub>	q <sub>c1-N</sub>	q <sub>c1-N-CS</sub>	Stress Reduction Coeff. r <sub>d</sub>	CSR	K <sub>σ</sub> for Sand	CRR <sub>M=7.5</sub> σ' <sub>vc</sub> = 1 atm	CRR	Factor of Safety (CRR/CSR)	Vertical Strain ε <sub>v</sub>	Settlement (Inches)
31.660	9.080	0.255	3874.2	2834.6	5.040	3.571	3.29		Clay	61.8			8.58	0.93	n.a.	n.a.	0.86	0.475	n.a.	n.a.	n.a.	n.a.	0.00	0.00
31.824	10.110	0.348	3893.9	2844.1	5.740	4.258	3.28		Clay	61.5			9.56	0.92	n.a.	n.a.	0.86	0.475	n.a.	n.a.	n.a.	n.a.	0.00	0.00
31.988	10.930	0.441	3913.6	2853.5	6.289	4.912	3.28		Clay	61.7			10.33	0.92	n.a.	n.a.	0.86	0.475	n.a.	n.a.	n.a.	n.a.	0.00	0.00
32.152	10.190	0.468	3933.3	2863.0	5.745	5.695	3.35		Clay	65.1			9.63	0.92	n.a.	n.a.	0.86	0.475	n.a.	n.a.	n.a.	n.a.	0.00	0.00
32.316	10.370	0.445	3953.0	2872.4	5.844	5.299	3.33		Clay	63.9			9.80	0.92	n.a.	n.a.	0.86	0.475	n.a.	n.a.	n.a.	n.a.	0.00	0.00
32.480	9.730	0.425	3972.6	2881.9	5.374	5.492	3.37		Clay	65.8			9.20	0.92	n.a.	n.a.	0.86	0.475	n.a.	n.a.	n.a.	n.a.	0.00	0.00
32.644	9.490	0.394	3992.3	2891.3	5.184	5.251	3.37		Clay	65.9			8.97	0.92	n.a.	n.a.	0.86	0.474	n.a.	n.a.	n.a.	n.a.	0.00	0.00
32.808	9.470	0.370	4012.0	2900.8	5.146	4.952	3.36		Clay	65.3			8.95	0.92	n.a.	n.a.	0.86	0.474	n.a.	n.a.	n.a.	n.a.	0.00	0.00
32.972	9.670	0.375	4031.7	2910.2	5.260	4.898	3.35		Clay	64.8			9.14	0.92	n.a.	n.a.	0.86	0.474	n.a.	n.a.	n.a.	n.a.	0.00	0.00
33.136	10.010	0.365	4051.4	2919.7	5.469	4.575	3.32		Clay	63.2			9.46	0.92	n.a.	n.a.	0.85	0.474	n.a.	n.a.	n.a.	n.a.	0.00	0.00
33.301	10.120	0.361	4071.1	2929.1	5.520	4.459	3.31		Clay	62.8			9.57	0.92	n.a.	n.a.	0.85	0.474	n.a.	n.a.	n.a.	n.a.	0.00	0.00
33.465	10.220	0.332	4090.7	2938.6	5.564	4.056	3.28		Clay	61.5			9.66	0.92	n.a.	n.a.	0.85	0.474	n.a.	n.a.	n.a.	n.a.	0.00	0.00
33.629	9.650	0.299	4110.4	2948.0	5.152	3.933	3.30		Clay	62.5			9.12	0.92	n.a.	n.a.	0.85	0.474	n.a.	n.a.	n.a.	n.a.	0.00	0.00
33.793	9.170	0.264	4130.1	2957.5	4.805	3.717	3.31		Clay	63.1			8.67	0.92	n.a.	n.a.	0.85	0.474	n.a.	n.a.	n.a.	n.a.	0.00	0.00
33.957	8.660	0.256	4149.8	2966.9	4.439	3.880	3.35		Clay	65.0			8.19	0.91	n.a.	n.a.	0.85	0.474	n.a.	n.a.	n.a.	n.a.	0.00	0.00
34.121	9.250	0.248	4169.5	2976.4	4.815	3.458	3.30		Clay	62.2			8.74	0.91	n.a.	n.a.	0.85	0.473	n.a.	n.a.	n.a.	n.a.	0.00	0.00
34.285	9.390	0.265	4189.2	2985.8	4.887	3.637	3.30		Clay	62.5			8.88	0.91	n.a.	n.a.	0.85	0.473	n.a.	n.a.	n.a.	n.a.	0.00	0.00
34.449	9.420	0.279	4208.9	2995.3	4.885	3.811	3.31		Clay	63.1			8.90	0.91	n.a.	n.a.	0.85	0.473	n.a.	n.a.	n.a.	n.a.	0.00	0.00
34.613	9.560	0.287	4228.5	3004.7	4.956	3.848	3.31		Clay	62.9			9.04	0.91	n.a.	n.a.	0.85	0.473	n.a.	n.a.	n.a.	n.a.	0.00	0.00
34.777	9.430	0.289	4248.2	3014.1	4.848	3.950	3.32		Clay	63.6			8.91	0.91	n.a.	n.a.	0.84	0.473	n.a.	n.a.	n.a.	n.a.	0.00	0.00
34.941	9.490	0.272	4267.9	3023.6	4.866	3.702	3.31		Clay	62.8			8.97	0.91	n.a.	n.a.	0.84	0.473	n.a.	n.a.	n.a.	n.a.	0.00	0.00
35.105	9.000	0.264	4287.6	3033.0	4.521	3.848	3.34		Clay	64.6			8.51	0.91	n.a.	n.a.	0.84	0.473	n.a.	n.a.	n.a.	n.a.	0.00	0.00
35.269	9.250	0.249	4307.3	3042.5	4.665	3.506	3.31		Clay	62.9			8.74	0.91	n.a.	n.a.	0.84	0.472	n.a.	n.a.	n.a.	n.a.	0.00	0.00
35.433	9.700	0.235	4327.0	3051.9	4.939	3.122	3.26		Clay	60.6			9.17	0.91	n.a.	n.a.	0.84	0.472	n.a.	n.a.	n.a.	n.a.	0.00	0.00
35.597	9.590	0.232	4346.7	3061.4	4.845	3.123	3.27		Clay	61.0			9.06	0.91	n.a.	n.a.	0.84	0.472	n.a.	n.a.	n.a.	n.a.	0.00	0.00
35.761	9.740	0.200	4366.3	3070.8	4.922	2.644	3.23		Clay	58.9			9.21	0.91	n.a.	n.a.	0.84	0.472	n.a.	n.a.	n.a.	n.a.	0.00	0.00
35.925	9.960	0.203	4386.0	3080.3	5.043	2.615	3.22		Clay	58.3			9.41	0.91	n.a.	n.a.	0.84	0.472	n.a.	n.a.	n.a.	n.a.	0.00	0.00
36.089	11.420	0.235	4405.7	3089.7	5.966	2.547	3.15		Clay	55.2			10.79	0.90	n.a.	n.a.	0.84	0.472	n.a.	n.a.	n.a.	n.a.	0.00	0.00
36.253	11.720	0.324	4425.4	3099.2	6.135	3.411	3.20		Clay	57.8			11.08	0.90	n.a.	n.a.	0.84	0.471	n.a.	n.a.	n.a.	n.a.	0.00	0.00
36.417	13.740	0.522	4445.1	3108.6	7.410	4.534	3.21		Clay	57.9			12.99	0.90	n.a.	n.a.	0.84	0.471	n.a.	n.a.	n.a.	n.a.	0.00	0.00
36.581	19.300	0.660	4464.8	3118.1	10.947	3.866	3.03		Clay	49.9			18.24	0.90	n.a.	n.a.	0.83	0.471	n.a.	n.a.	n.a.	n.a.	0.00	0.00
36.745	35.170	0.639	4484.4	3127.5	21.057	1.939	2.62		Clay	34.4			33.24	0.90	n.a.	n.a.	0.83	0.471	n.a.	n.a.	n.a.	n.a.	0.00	0.00
36.909	40.280	0.619	4504.1	3137.0	29.520	1.627	2.46		Sand	29.1	1.8		68.53	0.82	56.52	104.07	0.83	0.471	0.957	0.149	0.167	0.36	0.03	0.06
37.073	27.470	0.513	4523.8	3146.4	16.023	2.034	2.73		Clay	38.2			25.96	0.90	n.a.	n.a.	0.83	0.471	n.a.	n.a.	n.a.	n.a.	0.00	0.00
37.238	14.480	0.342	4543.5	3155.9	7.737	2.801	3.07		Clay	51.9			13.69	0.90	n.a.	n.a.	0.83	0.470	n.a.	n.a.	n.a.	n.a.	0.00	0.00
37.402	9.260	0.360	4563.2	3165.3	4.409	5.165	3.42		Clay	68.7			8.75	0.90	n.a.	n.a.	0.83	0.470	n.a.	n.a.	n.a.	n.a.	0.00	0.00
37.566	9.370	0.455	4582.9	3174.8	4.459	6.431	3.47		Clay	71.4			8.86	0.90	n.a.	n.a.	0.83	0.470	n.a.	n.a.	n.a.	n.a.	0.00	0.00
37.730	21.560	0.562	4602.6	3184.2	12.096	2.916	2.92		Clay	45.5			20.38	0.90	n.a.	n.a.	0.83	0.470	n.a.	n.a.	n.a.	n.a.	0.00	0.00
37.894	21.190	0.593	4622.2	3193.7	11.823	3.140	2.95		Clay	46.6			20.03	0.90	n.a.	n.a.	0.83	0.469	n.a.	n.a.	n.a.	n.a.	0.00	0.00
38.058	16.830	0.672	4641.9	3203.1	9.059	4.634	3.14		Clay	54.9			15.91	0.90	n.a.	n.a.	0.83	0.469	n.a.	n.a.	n.a.	n.a.	0.00	0.00
38.222	15.190	0.568	4661.6	3212.6	8.006	4.418	3.17		Clay	56.4			14.36	0.90	n.a.	n.a.	0.82	0.469	n.a.	n.a.	n.a.	n.a.	0.00	0.00
38.386	15.940	0.575	4681.3	3222.0	8.441	4.227	3.14		Clay	55.0			15.07	0.89	n.a.	n.a.	0.82	0.469	n.a.	n.a.	n.a.	n.a.	0.00	0.00
38.550	15.090	0.557	4701.0	3231.5	7.885	4.369	3.18		Clay	56.5			14.26	0.89	n.a.	n.a.	0.82	0.469	n.a.	n.a.	n.a.	n.a.	0.00	0.00
38.714	13.250	0.517	4720.7	3240.9	6.720	4.749	3.25		Clay	60.1			12.52	0.89	n.a.	n.a.	0.82	0.468	n.a.	n.a.	n.a.	n.a.	0.00	0.00
38.878	12.970	0.433	4740.4	3250.4	6.522	4.088	3.23		Clay	58.8			12.26	0.89	n.a.	n.a.	0.82	0.468	n.a.	n.a.	n.a.	n.a.	0.00	0.00
39.042	11.780	0.391	4760.0	3259.8	5.767	4.161	3.27		Clay	61.2			11.13	0.89	n.a.	n.a.	0.82	0.468	n.a.	n.a.	n.a.	n.a.	0.00	0.00
39.206	10.380	0.346	4779.7	3269.3	4.888	4.335	3.34		Clay	64.6			9.81	0.89	n.a.	n.a.	0.82	0.468	n.a.	n.a.	n.a.	n.a.	0.00	0.00
39.370	10.090	0.298	4799.4	3278.7	4.691	3.872	3.33		Clay	64.0			9.54	0.89	n.a.	n.a.	0.82	0.467	n.a.	n.a.	n.a.	n.a.	0.00	0.00
39.534	9.830	0.297	4819.1	3288.2	4.513	4.004	3.35		Clay	65.1			9.29	0.89	n.a.	n.a.	0.82	0.467	n.a.	n.a.	n.a.	n.a.	0.00	0.00
39.698	9.780	0.267	4838.8	3297.6	4.464	3.626	3.33		Clay	64.1			9.24	0.89	n.a.	n.a.	0.82	0.467	n.a.	n.a.	n.a.	n.a.	0.00	0.00
39.862	10.030	0.286	4858.5	3307.1	4.597	3.756	3.33		Clay	64.0			9.48	0.89	n.a.	n.a.	0.82	0.467	n.a.	n.a.	n.a.	n.a.	0.00	0.00
40.026	10.170	0.412	4878.1	3316.5	4.662	5.323	3.41		Clay	68.0			9.61	0.89	n.a.	n.a.	0.81	0.466	n.a.	n.a.	n.a.	n.a.	0.00	0.00
40.190	15.050	0.637	4897.8	3326.0	7.577	5.056	3.23		Clay	58.9			14.22	0.89	n.a.	n.a.	0.81	0.466	n.a.	n.a.	n.a.	n.a.	0.00	0.00
40.354	23.250	0.924	4917.5	3335.4	12.467	4.444	3.02		Clay	49.6			21.98	0.89	n.a.	n.a.	0.81	0.466	n.a.	n.a.	n.a.	n.a.	0.00	0.00
40.518	34.150	1.084	4937.2	3344.9	18.943	3.420	2.81		Clay	41.0			32.28	0.89	n.a.	n.a.	0.81	0.466	n.a.	n.a.	n.a.	n.a.	0.00	0.00
40.682	26.390	0.955	4956.9	3354.3	14.257	3.993	2.95		Clay	46.5			24.94	0.89	n.a.	n.a.	0.81	0.465	n.a.	n.a.	n.a.	n.a.	0.00	0.00
40.846	19.620	0.656	4976.6	3363.8	10.186	3.830	3.05		Clay	50.9			18.54	0.88	n.a.	n.a.	0.8							

CPT No. 5

PGA (A<sub>max</sub>) 0.50

Total Settlement: 0.32 (Inches)

Depth (ft)	q <sub>c</sub> (tsf)	f <sub>s</sub> (tsf)	σ <sub>vc</sub> (psf)	In situ σ'vc (psf)	Q	F (%)	lc	Layer "Plastic" PI > 7	Flag Soil Type	Fines (%)	q <sub>c-N</sub> near interfaces (soft layer)	Thin Layer Factor (K <sub>tl</sub> )	Interpreted q <sub>c-N</sub>	C <sub>N</sub>	q <sub>c1-N</sub>	q <sub>c1-N-CS</sub>	Stress Reduction Coeff. r <sub>d</sub>	CSR	K <sub>σ</sub> for Sand	CRRM=7.5, σ'vc = 1 atm	CRR	Factor of Safety (CRR/CSR)	Vertical Strain ε <sub>v</sub>	Settlement (Inches)
42.159	19.060	0.860	5134.1	3439.3	9.591	5.213	3.15		Clay	55.5			18.02	0.88	n.a.	n.a.	0.80	0.463	n.a.	n.a.	n.a.	n.a.	0.00	0.00
42.323	19.580	0.852	5153.7	3448.8	9.860	5.013	3.13		Clay	54.5			18.51	0.88	n.a.	n.a.	0.80	0.463	n.a.	n.a.	n.a.	n.a.	0.00	0.00
42.487	16.560	0.679	5173.4	3458.2	8.081	4.857	3.19		Clay	57.3			15.65	0.88	n.a.	n.a.	0.80	0.462	n.a.	n.a.	n.a.	n.a.	0.00	0.00
42.651	13.340	0.543	5193.1	3467.7	6.196	5.055	3.30		Clay	62.3			12.61	0.88	n.a.	n.a.	0.80	0.462	n.a.	n.a.	n.a.	n.a.	0.00	0.00
42.815	12.720	0.409	5212.8	3477.1	5.817	4.047	3.26		Clay	60.7			12.02	0.88	n.a.	n.a.	0.80	0.462	n.a.	n.a.	n.a.	n.a.	0.00	0.00
42.979	12.130	0.319	5232.5	3486.6	5.457	3.348	3.24		Clay	59.6			11.47	0.88	n.a.	n.a.	0.80	0.461	n.a.	n.a.	n.a.	n.a.	0.00	0.00
43.143	10.690	0.268	5252.2	3496.0	4.613	3.322	3.30		Clay	62.5			10.10	0.88	n.a.	n.a.	0.80	0.461	n.a.	n.a.	n.a.	n.a.	0.00	0.00
43.307	10.750	0.250	5271.9	3505.5	4.629	3.077	3.28		Clay	61.6			10.16	0.88	n.a.	n.a.	0.80	0.461	n.a.	n.a.	n.a.	n.a.	0.00	0.00
43.471	11.160	0.252	5291.5	3514.9	4.845	2.963	3.26		Clay	60.4			10.55	0.87	n.a.	n.a.	0.79	0.461	n.a.	n.a.	n.a.	n.a.	0.00	0.00
43.635	11.550	0.289	5311.2	3524.4	5.047	3.249	3.26		Clay	60.7			10.92	0.87	n.a.	n.a.	0.79	0.460	n.a.	n.a.	n.a.	n.a.	0.00	0.00
43.799	12.450	0.301	5330.9	3533.8	5.538	3.074	3.22		Clay	58.4			11.77	0.87	n.a.	n.a.	0.79	0.460	n.a.	n.a.	n.a.	n.a.	0.00	0.00
43.963	12.790	0.289	5350.6	3543.3	5.709	2.860	3.19		Clay	57.1			12.09	0.87	n.a.	n.a.	0.79	0.460	n.a.	n.a.	n.a.	n.a.	0.00	0.00
44.127	12.670	0.294	5370.3	3552.7	5.621	2.942	3.20		Clay	57.7			11.98	0.87	n.a.	n.a.	0.79	0.459	n.a.	n.a.	n.a.	n.a.	0.00	0.00
44.291	13.180	0.304	5390.0	3562.2	5.887	2.902	3.18		Clay	56.8			12.46	0.87	n.a.	n.a.	0.79	0.459	n.a.	n.a.	n.a.	n.a.	0.00	0.00
44.455	14.210	0.353	5409.6	3571.6	6.443	3.072	3.16		Clay	55.8			13.43	0.87	n.a.	n.a.	0.79	0.459	n.a.	n.a.	n.a.	n.a.	0.00	0.00
44.619	15.600	0.395	5429.3	3581.1	7.196	3.066	3.12		Clay	54.0			14.74	0.87	n.a.	n.a.	0.79	0.458	n.a.	n.a.	n.a.	n.a.	0.00	0.00
44.783	15.720	0.399	5449.0	3590.5	7.239	3.066	3.12		Clay	53.9			14.86	0.87	n.a.	n.a.	0.79	0.458	n.a.	n.a.	n.a.	n.a.	0.00	0.00
44.948	15.790	0.457	5468.7	3600.0	7.253	3.503	3.15		Clay	55.3			14.92	0.87	n.a.	n.a.	0.79	0.458	n.a.	n.a.	n.a.	n.a.	0.00	0.00
45.112	17.910	0.473	5488.4	3609.4	8.403	3.117	3.07		Clay	51.7			16.93	0.87	n.a.	n.a.	0.78	0.457	n.a.	n.a.	n.a.	n.a.	0.00	0.00
45.276	18.110	0.514	5508.1	3618.9	8.487	3.347	3.08		Clay	52.3			17.12	0.87	n.a.	n.a.	0.78	0.457	n.a.	n.a.	n.a.	n.a.	0.00	0.00
45.440	18.220	0.359	5527.8	3628.3	8.520	2.319	2.99		Clay	48.5			17.22	0.87	n.a.	n.a.	0.78	0.457	n.a.	n.a.	n.a.	n.a.	0.00	0.00
45.604	15.180	0.371	5547.4	3637.8	6.821	2.986	3.13		Clay	54.6			14.35	0.87	n.a.	n.a.	0.78	0.457	n.a.	n.a.	n.a.	n.a.	0.00	0.00
45.768	13.150	0.434	5567.1	3647.2	5.685	4.188	3.28		Clay	61.5			12.43	0.87	n.a.	n.a.	0.78	0.456	n.a.	n.a.	n.a.	n.a.	0.00	0.00
45.932	13.110	0.505	5586.8	3656.7	5.643	4.891	3.32		Clay	63.5			12.39	0.87	n.a.	n.a.	0.78	0.456	n.a.	n.a.	n.a.	n.a.	0.00	0.00
46.096	13.760	0.548	5606.5	3666.1	5.977	4.999	3.31		Clay	62.8			13.01	0.87	n.a.	n.a.	0.78	0.456	n.a.	n.a.	n.a.	n.a.	0.00	0.00
46.260	13.530	0.592	5626.2	3675.6	5.831	5.523	3.34		Clay	64.5			12.79	0.86	n.a.	n.a.	0.78	0.455	n.a.	n.a.	n.a.	n.a.	0.00	0.00
46.424	15.130	0.729	5645.9	3685.0	6.680	5.923	3.31		Clay	63.0			14.30	0.86	n.a.	n.a.	0.78	0.455	n.a.	n.a.	n.a.	n.a.	0.00	0.00
46.588	15.760	0.846	5665.6	3694.5	6.998	6.546	3.32		Clay	63.5			14.90	0.86	n.a.	n.a.	0.78	0.455	n.a.	n.a.	n.a.	n.a.	0.00	0.00
46.752	15.140	0.781	5685.2	3703.9	6.640	6.354	3.33		Clay	64.0			14.31	0.86	n.a.	n.a.	0.78	0.454	n.a.	n.a.	n.a.	n.a.	0.00	0.00
46.916	13.990	0.668	5704.9	3713.4	5.999	6.000	3.35		Clay	65.0			13.22	0.86	n.a.	n.a.	0.77	0.454	n.a.	n.a.	n.a.	n.a.	0.00	0.00
47.080	13.530	0.574	5724.6	3722.8	5.731	5.381	3.34		Clay	64.4			12.79	0.86	n.a.	n.a.	0.77	0.454	n.a.	n.a.	n.a.	n.a.	0.00	0.00
47.244	12.690	0.481	5744.3	3732.3	5.261	4.897	3.35		Clay	64.8			11.99	0.86	n.a.	n.a.	0.77	0.453	n.a.	n.a.	n.a.	n.a.	0.00	0.00
47.408	11.990	0.392	5764.0	3741.7	4.868	4.307	3.34		Clay	64.6			11.33	0.86	n.a.	n.a.	0.77	0.453	n.a.	n.a.	n.a.	n.a.	0.00	0.00
47.572	11.420	0.324	5783.7	3751.2	4.547	3.802	3.34		Clay	64.4			10.79	0.86	n.a.	n.a.	0.77	0.453	n.a.	n.a.	n.a.	n.a.	0.00	0.00
47.736	11.220	0.303	5803.3	3760.6	4.424	3.643	3.34		Clay	64.4			10.60	0.86	n.a.	n.a.	0.77	0.452	n.a.	n.a.	n.a.	n.a.	0.00	0.00
47.900	11.520	0.312	5823.0	3770.1	4.567	3.619	3.33		Clay	63.7			10.89	0.86	n.a.	n.a.	0.77	0.452	n.a.	n.a.	n.a.	n.a.	0.00	0.00
48.064	12.210	0.323	5842.7	3779.5	4.915	3.472	3.29		Clay	61.9			11.54	0.86	n.a.	n.a.	0.77	0.451	n.a.	n.a.	n.a.	n.a.	0.00	0.00
48.228	13.060	0.369	5862.4	3789.0	5.346	3.640	3.27		Clay	60.9			12.34	0.86	n.a.	n.a.	0.77	0.451	n.a.	n.a.	n.a.	n.a.	0.00	0.00
48.392	14.370	0.464	5882.1	3798.4	6.018	4.057	3.25		Clay	60.1			13.58	0.86	n.a.	n.a.	0.77	0.451	n.a.	n.a.	n.a.	n.a.	0.00	0.00
48.556	16.310	0.558	5901.8	3807.9	7.017	4.179	3.21		Clay	57.9			15.42	0.86	n.a.	n.a.	0.77	0.450	n.a.	n.a.	n.a.	n.a.	0.00	0.00
48.720	16.650	0.611	5921.5	3817.3	7.172	4.463	3.21		Clay	58.3			15.74	0.86	n.a.	n.a.	0.76	0.450	n.a.	n.a.	n.a.	n.a.	0.00	0.00
48.885	16.470	0.578	5941.1	3826.7	7.055	4.278	3.21		Clay	58.1			15.57	0.86	n.a.	n.a.	0.76	0.450	n.a.	n.a.	n.a.	n.a.	0.00	0.00
49.049	15.890	0.557	5960.8	3836.2	6.730	4.318	3.23		Clay	59.0			15.02	0.85	n.a.	n.a.	0.76	0.449	n.a.	n.a.	n.a.	n.a.	0.00	0.00
49.213	15.430	0.535	5980.5	3845.6	6.470	4.302	3.24		Clay	59.6			14.58	0.85	n.a.	n.a.	0.76	0.449	n.a.	n.a.	n.a.	n.a.	0.00	0.00
49.377	16.040	0.643	6000.2	3855.1	6.765	4.929	3.26		Clay	60.5			15.16	0.85	n.a.	n.a.	0.76	0.449	n.a.	n.a.	n.a.	n.a.	0.00	0.00
49.541	19.970	0.879	6019.9	3864.5	8.777	5.183	3.18		Clay	56.8			18.88	0.85	n.a.	n.a.	0.76	0.448	n.a.	n.a.	n.a.	n.a.	0.00	0.00
49.705	30.880	0.961	6039.6	3874.0	14.383	3.449	2.90		Clay	44.8			29.19	0.85	n.a.	n.a.	0.76	0.448	n.a.	n.a.	n.a.	n.a.	0.00	0.00
49.869	43.960	0.987	6059.3	3883.4	21.079	2.412	2.68		Clay	36.3			41.55	0.85	n.a.	n.a.	0.76	0.448	n.a.	n.a.	n.a.	n.a.	0.00	0.00
50.033	52.230	0.607	6078.9	3892.9	34.278	1.234	2.34		Sand	25.5	1.8		88.86	0.75	66.93	115.89	0.76	0.447	0.927	0.171	0.186	0.42	0.03	0.00
50.197	47.270	0.540	6098.6	3902.3	30.778	1.222	2.37		Sand	26.5	1.8		80.42	0.74	59.86	107.23	0.76	0.447	0.931	0.155	0.169	0.38	0.03	0.00
50.361	26.170	0.316	6118.3	3911.8	11.816	1.367	2.75		Clay	39.0			24.74	0.85	n.a.	n.a.	0.76	0.447	n.a.	n.a.	n.a.	n.a.	0.00	0.00
50.525	16.100	0.452	6138.0	3921.2	6.646	3.467	3.18		Clay	56.6			15.22	0.85	n.a.	n.a.	0.75	0.446	n.a.	n.a.	n.a.	n.a.	0.00	0.00
50.689	18.070	0.556	6157.7	3930.7	7.628	3.707	3.15		Clay	55.1			17.08	0.85	n.a.	n.a.	0.75	0.446	n.a.	n.a.	n.a.	n.a.	0.00	0.00
50.853	22.240	0.754	6177.4	3940.1	9.721	3.934	3.07		Clay	51.9			21.02	0.85	n.a.	n.a.	0.75	0.445	n.a.	n.a.	n.a.	n.a.	0.00	0.00
51.017	22.750	0.878	6197.0	3949.6	9.951	4.469	3.10		Clay	53.0			21.50	0.85	n.a.	n.a.	0.75	0.445	n.a.	n.a.	n.a.	n.a.	0.00	0.00
51.181	24.200	1.005	6216.7	3959.0	10.655	4.763	3.09		Clay	52.7			22.87	0.85	n.a.	n.a.	0.75	0.445	n.a.	n.a.	n.a.	n.a.	0.00	0.00
51.345	28.640	1.138	6236.4	3968.5	12.862	4.459	3.01		Clay															

Depth (ft)	q <sub>c</sub> (tsf)	f <sub>s</sub> (tsf)	σ <sub>vc</sub> (psf)	Insitu σ'vc (psf)	Q	F (%)	lc	Layer "Plastic" PI > 7	Flag Soil Type	Fines (%)	q <sub>c-N</sub> near interfaces (soft layer)	Thin Layer Factor (K <sub>tl</sub> )	Interpreted q <sub>c-N</sub>	C <sub>N</sub>	q <sub>c1N</sub>	q <sub>c1N-CS</sub>	Stress Reduction Coeff. r <sub>d</sub>	CSR	K <sub>σ</sub> for Sand	CRRM=7.5, σ'vc = 1 atm	CRR	Factor of Safety (CRR/CSR)	Vertical Strain ε <sub>v</sub>	Settlement (Inches)
52.657	15.380	0.688	6393.9	4044.1	6.025	5.646	3.34		Clay	64.2			14.54	0.84	n.a.	n.a.	0.74	0.441	n.a.	n.a.	n.a.	n.a.	0.00	0.00
52.822	15.540	0.583	6413.6	4053.5	6.085	4.729	3.29		Clay	61.8			14.69	0.84	n.a.	n.a.	0.74	0.441	n.a.	n.a.	n.a.	n.a.	0.00	0.00
52.986	14.830	0.526	6433.3	4063.0	5.717	4.529	3.30		Clay	62.3			14.02	0.84	n.a.	n.a.	0.74	0.441	n.a.	n.a.	n.a.	n.a.	0.00	0.00
53.150	14.180	0.510	6453.0	4072.4	5.379	4.653	3.33		Clay	63.7			13.40	0.84	n.a.	n.a.	0.74	0.440	n.a.	n.a.	n.a.	n.a.	0.00	0.00
53.314	15.500	0.525	6472.6	4081.9	6.009	4.278	3.27		Clay	60.8			14.65	0.84	n.a.	n.a.	0.74	0.440	n.a.	n.a.	n.a.	n.a.	0.00	0.00
53.478	16.760	0.523	6492.3	4091.3	6.606	3.873	3.21		Clay	58.0			15.84	0.84	n.a.	n.a.	0.74	0.440	n.a.	n.a.	n.a.	n.a.	0.00	0.00
53.642	17.600	0.532	6512.0	4100.8	6.996	3.708	3.18		Clay	56.5			16.64	0.84	n.a.	n.a.	0.74	0.439	n.a.	n.a.	n.a.	n.a.	0.00	0.00
53.806	16.970	0.544	6531.7	4110.2	6.668	3.970	3.21		Clay	58.1			16.04	0.84	n.a.	n.a.	0.74	0.439	n.a.	n.a.	n.a.	n.a.	0.00	0.00
53.970	17.290	0.542	6551.4	4119.7	6.804	3.865	3.20		Clay	57.5			16.34	0.84	n.a.	n.a.	0.74	0.438	n.a.	n.a.	n.a.	n.a.	0.00	0.00
54.134	17.230	0.476	6571.1	4129.1	6.754	3.416	3.17		Clay	56.2			16.29	0.84	n.a.	n.a.	0.73	0.438	n.a.	n.a.	n.a.	n.a.	0.00	0.00
54.298	15.880	0.486	6590.7	4138.6	6.082	3.863	3.24		Clay	59.4			15.01	0.84	n.a.	n.a.	0.73	0.438	n.a.	n.a.	n.a.	n.a.	0.00	0.00
54.462	15.980	0.493	6610.4	4148.0	6.111	3.886	3.24		Clay	59.4			15.10	0.84	n.a.	n.a.	0.73	0.437	n.a.	n.a.	n.a.	n.a.	0.00	0.00
54.626	16.920	0.513	6630.1	4157.5	6.545	3.770	3.20		Clay	57.8			15.99	0.84	n.a.	n.a.	0.73	0.437	n.a.	n.a.	n.a.	n.a.	0.00	0.00
54.790	16.610	0.515	6649.8	4166.9	6.376	3.879	3.22		Clay	58.6			15.70	0.84	n.a.	n.a.	0.73	0.437	n.a.	n.a.	n.a.	n.a.	0.00	0.00
54.954	16.610	0.464	6669.5	4176.4	6.357	3.494	3.20		Clay	57.5			15.70	0.84	n.a.	n.a.	0.73	0.436	n.a.	n.a.	n.a.	n.a.	0.00	0.00
55.118	16.450	0.527	6689.2	4185.8	6.262	4.021	3.24		Clay	59.3			15.55	0.84	n.a.	n.a.	0.73	0.436	n.a.	n.a.	n.a.	n.a.	0.00	0.00
55.282	17.530	0.592	6708.9	4195.3	6.758	4.175	3.22		Clay	58.5			16.57	0.83	n.a.	n.a.	0.73	0.435	n.a.	n.a.	n.a.	n.a.	0.00	0.00
55.446	18.900	0.597	6728.5	4204.7	7.390	3.842	3.17		Clay	56.0			17.86	0.83	n.a.	n.a.	0.73	0.435	n.a.	n.a.	n.a.	n.a.	0.00	0.00
55.610	19.980	0.336	6748.2	4214.1	7.881	2.020	2.99		Clay	48.4			18.88	0.83	n.a.	n.a.	0.73	0.435	n.a.	n.a.	n.a.	n.a.	0.00	0.00
55.774	18.410	0.311	6767.9	4223.6	7.115	2.072	3.04		Clay	50.2			17.40	0.83	n.a.	n.a.	0.73	0.434	n.a.	n.a.	n.a.	n.a.	0.00	0.00
55.938	15.340	0.407	6787.6	4233.0	5.644	3.406	3.23		Clay	59.2			14.50	0.83	n.a.	n.a.	0.72	0.434	n.a.	n.a.	n.a.	n.a.	0.00	0.00
56.102	17.820	0.476	6807.3	4242.5	6.796	3.303	3.16		Clay	55.7			16.84	0.83	n.a.	n.a.	0.72	0.433	n.a.	n.a.	n.a.	n.a.	0.00	0.00
56.266	17.730	0.589	6827.0	4251.9	6.734	4.111	3.22		Clay	58.4			16.76	0.83	n.a.	n.a.	0.72	0.433	n.a.	n.a.	n.a.	n.a.	0.00	0.00
56.430	18.300	0.565	6846.7	4261.4	6.982	3.795	3.18		Clay	56.8			17.30	0.83	n.a.	n.a.	0.72	0.433	n.a.	n.a.	n.a.	n.a.	0.00	0.00
56.594	18.260	0.487	6866.3	4270.8	6.943	3.281	3.15		Clay	55.3			17.26	0.83	n.a.	n.a.	0.72	0.432	n.a.	n.a.	n.a.	n.a.	0.00	0.00
56.759	16.830	0.433	6886.0	4280.3	6.255	3.231	3.18		Clay	56.9			15.91	0.83	n.a.	n.a.	0.72	0.432	n.a.	n.a.	n.a.	n.a.	0.00	0.00
56.923	17.180	0.378	6905.7	4289.7	6.400	2.751	3.14		Clay	54.8			16.24	0.83	n.a.	n.a.	0.72	0.432	n.a.	n.a.	n.a.	n.a.	0.00	0.00
57.087	17.960	0.408	6925.4	4299.2	6.744	2.815	3.12		Clay	54.1			16.98	0.83	n.a.	n.a.	0.72	0.431	n.a.	n.a.	n.a.	n.a.	0.00	0.00
57.251	19.340	0.423	6945.1	4308.6	7.365	2.666	3.08		Clay	52.1			18.28	0.83	n.a.	n.a.	0.72	0.431	n.a.	n.a.	n.a.	n.a.	0.00	0.00
57.415	18.640	0.410	6964.8	4318.1	7.021	2.704	3.10		Clay	53.1			17.62	0.83	n.a.	n.a.	0.72	0.430	n.a.	n.a.	n.a.	n.a.	0.00	0.00
57.579	17.480	0.440	6984.4	4327.5	6.465	3.148	3.17		Clay	56.0			16.52	0.83	n.a.	n.a.	0.72	0.430	n.a.	n.a.	n.a.	n.a.	0.00	0.00
57.743	19.630	0.402	7004.1	4337.0	7.437	2.493	3.06		Clay	51.3			18.55	0.83	n.a.	n.a.	0.71	0.430	n.a.	n.a.	n.a.	n.a.	0.00	0.00
57.907	17.170	0.504	7023.8	4346.4	6.285	3.692	3.21		Clay	58.3			16.23	0.83	n.a.	n.a.	0.71	0.429	n.a.	n.a.	n.a.	n.a.	0.00	0.00
58.071	20.050	0.499	7043.5	4355.9	7.589	3.021	3.10		Clay	53.0			18.95	0.83	n.a.	n.a.	0.71	0.429	n.a.	n.a.	n.a.	n.a.	0.00	0.00
58.235	32.530	0.599	7063.2	4365.3	13.286	2.065	2.80		Clay	40.9			30.75	0.83	n.a.	n.a.	0.71	0.429	n.a.	n.a.	n.a.	n.a.	0.00	0.00
58.399	28.680	0.732	7082.9	4374.8	11.492	2.912	2.94		Clay	46.2			27.11	0.83	n.a.	n.a.	0.71	0.428	n.a.	n.a.	n.a.	n.a.	0.00	0.00
58.563	42.830	0.677	7102.6	4384.2	17.918	1.724	2.65		Clay	35.4			40.48	0.83	n.a.	n.a.	0.71	0.428	n.a.	n.a.	n.a.	n.a.	0.00	0.00
58.727	42.410	0.880	7122.2	4393.7	17.684	2.266	2.72		Clay	37.9			40.09	0.82	n.a.	n.a.	0.71	0.427	n.a.	n.a.	n.a.	n.a.	0.00	0.00
58.891	30.720	0.581	7141.9	4403.1	12.332	2.139	2.84		Clay	42.2			29.04	0.82	n.a.	n.a.	0.71	0.427	n.a.	n.a.	n.a.	n.a.	0.00	0.00
59.055	26.730	0.496	7161.6	4412.6	10.492	2.144	2.90		Clay	44.6			25.26	0.82	n.a.	n.a.	0.71	0.427	n.a.	n.a.	n.a.	n.a.	0.00	0.00
59.219	17.030	0.494	7181.3	4422.0	6.078	3.676	3.23		Clay	58.8			16.10	0.82	n.a.	n.a.	0.71	0.426	n.a.	n.a.	n.a.	n.a.	0.00	0.00
59.383	17.560	0.643	7201.0	4431.5	6.300	4.607	3.27		Clay	60.9			16.60	0.82	n.a.	n.a.	0.71	0.426	n.a.	n.a.	n.a.	n.a.	0.00	0.00
59.547	23.680	0.895	7220.7	4440.9	9.039	4.458	3.13		Clay	54.5			22.38	0.82	n.a.	n.a.	0.71	0.425	n.a.	n.a.	n.a.	n.a.	0.00	0.00
59.711	62.040	1.179	7240.4	4450.4	38.075	2.017	2.43		Sand	28.1	106	1.72	182.32	0.80	145.77	222.33	0.70	0.425	0.777	2.000	1.820	4.28	0.00	0.00
59.875	96.040	1.404	7260.0	4459.8	60.163	1.520	2.20		Sand	21.7	106	1.72	182.32	0.79	144.34	212.45	0.70	0.425	0.776	2.000	1.819	4.28	0.00	0.00
60.039	112.040	0.864	7279.7	4469.3	70.499	0.797	1.97		Sand	16.4			182.14	0.78	141.50	193.90	0.70	0.424	0.817	0.874	0.836	1.97	0.00	0.00
60.203	106.270	0.855	7299.4	4478.7	66.670	0.833	2.00		Sand	17.0			172.76	0.77	133.01	185.96	0.70	0.424	0.831	0.649	0.632	1.49	0.00	0.00
60.367	89.050	0.866	7319.1	4488.2	55.418	1.014	2.12		Sand	19.7	106	1.72	182.32	0.79	143.27	206.78	0.70	0.424	0.786	1.591	1.464	3.46	0.00	0.00
60.531	70.900	1.099	7338.8	4497.6	43.586	1.635	2.33		Sand	25.1	106	1.72	182.32	0.79	144.74	218.15	0.70	0.423	0.774	2.000	1.813	4.28	0.00	0.00
60.696	39.010	1.114	7358.5	4507.1	15.678	3.152	2.85		Clay	42.7			36.87	0.82	n.a.	n.a.	0.70	0.423	n.a.	n.a.	n.a.	n.a.	0.00	0.00
60.860	23.910	0.808	7378.1	4516.5	8.954	3.995	3.11		Clay	53.4			22.60	0.82	n.a.	n.a.	0.70	0.422	n.a.	n.a.	n.a.	n.a.	0.00	0.00
61.024	18.130	0.592	7397.8	4526.0	6.377	4.099	3.23		Clay	59.3			17.14	0.82	n.a.	n.a.	0.70	0.422	n.a.	n.a.	n.a.	n.a.	0.00	0.00
61.188	18.480	0.532	7417.5	4535.4	6.514	3.602	3.20		Clay	57.4			17.47	0.82	n.a.	n.a.	0.70	0.422	n.a.	n.a.	n.a.	n.a.	0.00	0.00
61.352	18.910	0.581	7437.2	4544.9	6.685	3.827	3.20		Clay	57.7			17.87	0.82	n.a.	n.a.	0.70	0.421	n.a.	n.a.	n.a.	n.a.	0.00	0.00
61.516	19.940	0.652	7456.9	4554.3	7.119	4.019	3.19		Clay	57.2			18.85	0.82	n.a.	n.a.	0.70	0.421	n.a.	n.a.	n.a.	n.a.	0.00	0.00
61.680	19.930	0.690	7476.6	4563.8	7.096	4.258	3.21		Clay	57.9			18.84	0.82	n.a.	n.a.	0.69							

Depth (ft)	$q_c$ (tsf)	$f_s$ (tsf)	$\sigma_{vc}$ (psf)	In situ $\sigma'_{vc}$ (psf)	Q	F (%)	$l_c$	Layer "Plastic" PI > 7	Flag Soil Type	Fines (%)	$q_{c-N}$ near interfaces (soft layer)	Thin Layer Factor ( $K_{t1}$ )	Interpreted $q_{c-N}$	$C_N$	$q_{c1N}$	$q_{c1N-CS}$	Stress Reduction Coeff. $r_d$	CSR	$K_{cs}$ for Sand	$CRR_{M=7.5}$ $r'_{vc} = 1 \text{ atm}$	CRR	Factor of Safety (CRR/CSR)	Vertical Strain $\epsilon_v$	Settlement (Inches)
63.156	15.640	0.412	7653.7	4648.8	5.082	3.484	3.28		Clay	61.3			14.78	0.81	n.a.	n.a.	0.69	0.417	n.a.	n.a.	n.a.	n.a.	0.00	0.00
63.320	15.270	0.416	7673.4	4658.2	4.909	3.638	3.30		Clay	62.5			14.43	0.81	n.a.	n.a.	0.69	0.417	n.a.	n.a.	n.a.	n.a.	0.00	0.00
63.484	15.710	0.392	7693.1	4667.7	5.083	3.306	3.27		Clay	60.7			14.85	0.81	n.a.	n.a.	0.69	0.416	n.a.	n.a.	n.a.	n.a.	0.00	0.00
63.648	15.730	0.420	7712.8	4677.1	5.077	3.534	3.28		Clay	61.5			14.87	0.81	n.a.	n.a.	0.68	0.416	n.a.	n.a.	n.a.	n.a.	0.00	0.00
63.812	16.390	0.381	7732.5	4686.6	5.345	3.038	3.23		Clay	58.9			15.49	0.81	n.a.	n.a.	0.68	0.415	n.a.	n.a.	n.a.	n.a.	0.00	0.00
63.976	16.670	0.338	7752.2	4696.0	5.449	2.638	3.19		Clay	57.1			15.76	0.81	n.a.	n.a.	0.68	0.415	n.a.	n.a.	n.a.	n.a.	0.00	0.00
64.140	16.220	0.311	7771.9	4705.5	5.242	2.518	3.19		Clay	57.3			15.33	0.81	n.a.	n.a.	0.68	0.415	n.a.	n.a.	n.a.	n.a.	0.00	0.00
64.304	15.490	0.296	7791.5	4714.9	4.918	2.553	3.22		Clay	58.5			14.64	0.81	n.a.	n.a.	0.68	0.414	n.a.	n.a.	n.a.	n.a.	0.00	0.00
64.469	14.460	0.287	7811.2	4724.4	4.468	2.717	3.27		Clay	60.9			13.67	0.81	n.a.	n.a.	0.68	0.414	n.a.	n.a.	n.a.	n.a.	0.00	0.00
64.633	14.790	0.292	7830.9	4733.8	4.594	2.686	3.26		Clay	60.3			13.98	0.81	n.a.	n.a.	0.68	0.414	n.a.	n.a.	n.a.	n.a.	0.00	0.00
64.797	14.530	0.322	7850.6	4743.3	4.471	3.039	3.29		Clay	62.1			13.73	0.81	n.a.	n.a.	0.68	0.413	n.a.	n.a.	n.a.	n.a.	0.00	0.00
64.961	14.840	0.339	7870.3	4752.7	4.589	3.108	3.29		Clay	61.9			14.03	0.81	n.a.	n.a.	0.68	0.413	n.a.	n.a.	n.a.	n.a.	0.00	0.00
65.125	14.690	0.356	7890.0	4762.2	4.513	3.313	3.31		Clay	62.9			13.88	0.81	n.a.	n.a.	0.68	0.412	n.a.	n.a.	n.a.	n.a.	0.00	0.00
65.289	14.840	0.372	7909.6	4771.6	4.562	3.417	3.31		Clay	62.9			14.03	0.81	n.a.	n.a.	0.68	0.412	n.a.	n.a.	n.a.	n.a.	0.00	0.00
65.453	15.530	0.363	7929.3	4781.1	4.838	3.142	3.27		Clay	61.1			14.68	0.81	n.a.	n.a.	0.68	0.412	n.a.	n.a.	n.a.	n.a.	0.00	0.00
65.617	14.530	0.363	7949.0	4790.5	4.407	3.435	3.33		Clay	63.8			13.73	0.81	n.a.	n.a.	0.68	0.411	n.a.	n.a.	n.a.	n.a.	0.00	0.00
65.781	14.580	0.369	7968.7	4800.0	4.415	3.485	3.33		Clay	63.9			13.78	0.81	n.a.	n.a.	0.67	0.411	n.a.	n.a.	n.a.	n.a.	0.00	0.00
65.945	14.850	0.427	7988.4	4809.4	4.514	3.936	3.35		Clay	64.9			14.04	0.81	n.a.	n.a.	0.67	0.411	n.a.	n.a.	n.a.	n.a.	0.00	0.00
66.109	15.280	0.489	8008.1	4818.9	4.680	4.337	3.36		Clay	65.4			14.44	0.80	n.a.	n.a.	0.67	0.410	n.a.	n.a.	n.a.	n.a.	0.00	0.00
66.273	15.820	0.586	8027.8	4828.3	4.890	4.961	3.38		Clay	66.3			14.95	0.80	n.a.	n.a.	0.67	0.410	n.a.	n.a.	n.a.	n.a.	0.00	0.00
66.437	16.310	0.629	8047.4	4837.8	5.079	5.121	3.37		Clay	66.0			15.42	0.80	n.a.	n.a.	0.67	0.409	n.a.	n.a.	n.a.	n.a.	0.00	0.00
66.601	16.470	0.608	8067.1	4847.2	5.131	4.892	3.36		Clay	65.2			15.57	0.80	n.a.	n.a.	0.67	0.409	n.a.	n.a.	n.a.	n.a.	0.00	0.00
66.765	16.320	0.589	8086.8	4856.7	5.056	4.796	3.36		Clay	65.2			15.43	0.80	n.a.	n.a.	0.67	0.409	n.a.	n.a.	n.a.	n.a.	0.00	0.00
66.929	16.020	0.612	8106.5	4866.1	4.918	5.117	3.38		Clay	66.5			15.14	0.80	n.a.	n.a.	0.67	0.408	n.a.	n.a.	n.a.	n.a.	0.00	0.00
67.093	16.960	0.652	8126.2	4875.6	5.290	5.052	3.35		Clay	65.1			16.03	0.80	n.a.	n.a.	0.67	0.408	n.a.	n.a.	n.a.	n.a.	0.00	0.00
67.257	17.250	0.707	8145.9	4885.0	5.395	5.368	3.36		Clay	65.5			16.30	0.80	n.a.	n.a.	0.67	0.408	n.a.	n.a.	n.a.	n.a.	0.00	0.00
67.421	17.430	0.738	8165.6	4894.5	5.454	5.528	3.36		Clay	65.7			16.47	0.80	n.a.	n.a.	0.67	0.407	n.a.	n.a.	n.a.	n.a.	0.00	0.00
67.585	18.420	0.775	8185.2	4903.9	5.843	5.409	3.34		Clay	64.2			17.41	0.80	n.a.	n.a.	0.67	0.407	n.a.	n.a.	n.a.	n.a.	0.00	0.00
67.749	18.720	0.763	8204.9	4913.4	5.950	5.216	3.32		Clay	63.4			17.69	0.80	n.a.	n.a.	0.66	0.406	n.a.	n.a.	n.a.	n.a.	0.00	0.00
67.913	18.660	0.745	8224.6	4922.8	5.910	5.122	3.32		Clay	63.3			17.64	0.80	n.a.	n.a.	0.66	0.406	n.a.	n.a.	n.a.	n.a.	0.00	0.00
68.077	18.890	0.739	8244.3	4932.3	5.988	5.001	3.31		Clay	62.7			17.85	0.80	n.a.	n.a.	0.66	0.406	n.a.	n.a.	n.a.	n.a.	0.00	0.00
68.241	19.500	0.790	8264.0	4941.7	6.220	5.141	3.30		Clay	62.4			18.43	0.80	n.a.	n.a.	0.66	0.405	n.a.	n.a.	n.a.	n.a.	0.00	0.00
68.406	19.960	0.760	8283.7	4951.2	6.390	4.806	3.27		Clay	61.1			18.87	0.80	n.a.	n.a.	0.66	0.405	n.a.	n.a.	n.a.	n.a.	0.00	0.00
68.570	19.790	0.746	8303.3	4960.6	6.305	4.772	3.28		Clay	61.3			18.71	0.80	n.a.	n.a.	0.66	0.405	n.a.	n.a.	n.a.	n.a.	0.00	0.00
68.734	19.490	0.659	8323.0	4970.1	6.168	4.302	3.26		Clay	60.4			18.42	0.80	n.a.	n.a.	0.66	0.404	n.a.	n.a.	n.a.	n.a.	0.00	0.00
68.898	19.240	0.532	8342.7	4979.5	6.052	3.527	3.22		Clay	58.4			18.19	0.80	n.a.	n.a.	0.66	0.404	n.a.	n.a.	n.a.	n.a.	0.00	0.00
69.062	17.640	0.481	8362.4	4989.0	5.395	3.573	3.26		Clay	60.6			16.67	0.80	n.a.	n.a.	0.66	0.403	n.a.	n.a.	n.a.	n.a.	0.00	0.00
69.226	18.440	0.413	8382.1	4998.4	5.701	2.900	3.19		Clay	57.3			17.43	0.80	n.a.	n.a.	0.66	0.403	n.a.	n.a.	n.a.	n.a.	0.00	0.00
69.390	18.280	0.371	8401.8	5007.9	5.623	2.633	3.18		Clay	56.5			17.28	0.80	n.a.	n.a.	0.66	0.403	n.a.	n.a.	n.a.	n.a.	0.00	0.00
69.554	17.330	0.363	8421.5	5017.3	5.230	2.766	3.21		Clay	58.3			16.38	0.80	n.a.	n.a.	0.66	0.402	n.a.	n.a.	n.a.	n.a.	0.00	0.00
69.718	17.000	0.391	8441.1	5026.7	5.085	3.058	3.25		Clay	59.9			16.07	0.80	n.a.	n.a.	0.66	0.402	n.a.	n.a.	n.a.	n.a.	0.00	0.00
69.882	17.470	0.448	8460.8	5036.2	5.258	3.385	3.26		Clay	60.4			16.51	0.80	n.a.	n.a.	0.66	0.402	n.a.	n.a.	n.a.	n.a.	0.00	0.00
70.046	18.670	0.493	8480.5	5045.6	5.720	3.419	3.23		Clay	59.0			17.65	0.80	n.a.	n.a.	0.65	0.401	n.a.	n.a.	n.a.	n.a.	0.00	0.00
70.210	18.980	0.510	8500.2	5055.1	5.828	3.461	3.23		Clay	58.9			17.94	0.79	n.a.	n.a.	0.65	0.401	n.a.	n.a.	n.a.	n.a.	0.00	0.00
70.374	18.290	0.455	8519.9	5064.5	5.541	3.242	3.23		Clay	59.0			17.29	0.79	n.a.	n.a.	0.65	0.401	n.a.	n.a.	n.a.	n.a.	0.00	0.00
70.538	17.320	0.443	8539.6	5074.0	5.144	3.397	3.27		Clay	60.8			16.37	0.79	n.a.	n.a.	0.65	0.400	n.a.	n.a.	n.a.	n.a.	0.00	0.00
70.702	18.230	0.436	8559.3	5083.4	5.489	3.125	3.22		Clay	58.8			17.23	0.79	n.a.	n.a.	0.65	0.400	n.a.	n.a.	n.a.	n.a.	0.00	0.00
70.866	18.370	0.401	8579.9	5092.9	5.529	2.845	3.20		Clay	57.6			17.36	0.79	n.a.	n.a.	0.65	0.399	n.a.	n.a.	n.a.	n.a.	0.00	0.00
71.030	17.060	0.357	8598.6	5102.3	5.002	2.797	3.23		Clay	59.2			16.12	0.79	n.a.	n.a.	0.65	0.399	n.a.	n.a.	n.a.	n.a.	0.00	0.00
71.194	16.340	0.376	8618.3	5111.8	4.707	3.124	3.28		Clay	61.5			15.44	0.79	n.a.	n.a.	0.65	0.399	n.a.	n.a.	n.a.	n.a.	0.00	0.00
71.358	17.070	0.388	8638.0	5121.2	4.980	3.042	3.25		Clay	60.2			16.13	0.79	n.a.	n.a.	0.65	0.398	n.a.	n.a.	n.a.	n.a.	0.00	0.00
71.522	17.670	0.413	8657.7	5130.7	5.201	3.093	3.24		Clay	59.6			16.70	0.79	n.a.	n.a.	0.65	0.398	n.a.	n.a.	n.a.	n.a.	0.00	0.00
71.686	17.570	0.372	8677.4	5140.1	5.148	2.815	3.22		Clay	58.8			16.61	0.79	n.a.	n.a.	0.65	0.398	n.a.	n.a.	n.a.	n.a.	0.00	0.00
71.850	15.780	0.314	8697.0	5149.6	4.440	2.743	3.27		Clay	61.1			14.91	0.79	n.a.	n.a.	0.65	0.397	n.a.	n.a.	n.a.	n.a.	0.00	0.00
72.014	13.940	0.273	8716.7	5159.0	3.715	2.847	3.35		Clay	64.8			13.18	0.79	n.a.	n.a.	0.65	0.397	n.a.	n.a.	n.a.	n.a.	0.00	0.00
72.178	13.230	0.258	8736.4	5168.5	3.429	2.913	3.38		Clay	66.6			12.50	0.79	n.a.	n.a.	0.65	0.397	n.a.	n.a.	n.a.	n.a.	0.00	0.00
72.343	13.470	0.242	8756.1																					



CPT No. 5

PGA ( $A_{max}$ ) 0.50

Total Settlement: 0.32 (Inches)

Depth (ft)	$q_c$ (tsf)	$f_s$ (tsf)	$\sigma_{vc}$ (psf)	In situ $\sigma'_{vc}$ (psf)	Q	F (%)	$I_c$	Layer "Plastic" PI > 7	Flag Soil Type	Fines (%)	$q_{cN}$ near interfaces (soft layer)	Thin Layer Factor ( $K_{t1}$ )	Interpreted $q_{cN}$	$C_N$	$q_{c1N}$	$q_{c1N-CS}$	Stress Reduction Coeff, $r_d$	CSR	$K_\sigma$ for Sand	$CRR_{M=7.5}$ $r'_{vc} = 1 \text{ atm}$	CRR	Factor of Safety (CRR/CSR)	Vertical Strain $\epsilon_v$	Settlement (Inches)
73.655	17.070	0.358	8913.6	5253.5	4.802	2.841	3.25		Clay	60.1			16.13	0.79	n.a.	n.a.	0.64	0.393	n.a.	n.a.	n.a.	n.a.	0.00	0.00
73.819	17.350	0.436	8933.3	5263.0	4.896	3.384	3.28		Clay	61.7			16.40	0.79	n.a.	n.a.	0.64	0.393	n.a.	n.a.	n.a.	n.a.	0.00	0.00
73.983	17.010	0.440	8953.0	5272.4	4.754	3.511	3.30		Clay	62.6			16.08	0.79	n.a.	n.a.	0.64	0.393	n.a.	n.a.	n.a.	n.a.	0.00	0.00
74.147	19.600	0.470	8972.6	5281.9	5.723	3.107	3.21		Clay	58.0			18.53	0.79	n.a.	n.a.	0.64	0.392	n.a.	n.a.	n.a.	n.a.	0.00	0.00
74.311	18.860	0.465	8992.3	5291.3	5.429	3.235	3.24		Clay	59.3			17.83	0.79	n.a.	n.a.	0.64	0.392	n.a.	n.a.	n.a.	n.a.	0.00	0.00
74.475	18.270	0.478	9012.0	5300.8	5.193	3.474	3.27		Clay	60.9			17.27	0.78	n.a.	n.a.	0.64	0.392	n.a.	n.a.	n.a.	n.a.	0.00	0.00
74.639	18.010	0.466	9031.7	5310.2	5.082	3.453	3.28		Clay	61.2			17.02	0.78	n.a.	n.a.	0.63	0.391	n.a.	n.a.	n.a.	n.a.	0.00	0.00
74.803	17.900	0.440	9051.4	5319.7	5.028	3.287	3.27		Clay	60.9			16.92	0.78	n.a.	n.a.	0.63	0.391	n.a.	n.a.	n.a.	n.a.	0.00	0.00
74.967	17.080	0.383	9071.1	5329.1	4.708	3.054	3.28		Clay	61.2			16.14	0.78	n.a.	n.a.	0.63	0.391	n.a.	n.a.	n.a.	n.a.	0.00	0.00
75.131	16.780	0.367	9090.7	5338.6	4.583	2.996	3.28		Clay	61.5			15.86	0.78	n.a.	n.a.	0.63	0.390	n.a.	n.a.	n.a.	n.a.	0.00	0.00
75.295	17.330	0.351	9110.4	5348.0	4.777	2.744	3.25		Clay	59.8			16.38	0.78	n.a.	n.a.	0.63	0.390	n.a.	n.a.	n.a.	n.a.	0.00	0.00
75.459	17.310	0.334	9130.1	5357.5	4.758	2.620	3.24		Clay	59.4			16.36	0.78	n.a.	n.a.	0.63	0.390	n.a.	n.a.	n.a.	n.a.	0.00	0.00
75.623	16.760	0.337	9149.8	5366.9	4.541	2.762	3.27		Clay	60.8			15.84	0.78	n.a.	n.a.	0.63	0.389	n.a.	n.a.	n.a.	n.a.	0.00	0.00
75.787	17.390	0.356	9169.5	5376.4	4.764	2.779	3.25		Clay	60.0			16.44	0.78	n.a.	n.a.	0.63	0.389	n.a.	n.a.	n.a.	n.a.	0.00	0.00
75.951	18.620	0.419	9189.2	5385.8	5.208	2.984	3.23		Clay	59.2			17.60	0.78	n.a.	n.a.	0.63	0.389	n.a.	n.a.	n.a.	n.a.	0.00	0.00
76.115	19.830	0.463	9208.9	5395.3	5.644	3.041	3.21		Clay	58.0			18.74	0.78	n.a.	n.a.	0.63	0.388	n.a.	n.a.	n.a.	n.a.	0.00	0.00
76.280	20.740	0.519	9228.5	5404.7	5.967	3.218	3.20		Clay	57.6			19.60	0.78	n.a.	n.a.	0.63	0.388	n.a.	n.a.	n.a.	n.a.	0.00	0.00
76.444	20.920	0.601	9248.2	5414.1	6.020	3.687	3.23		Clay	59.0			19.77	0.78	n.a.	n.a.	0.63	0.388	n.a.	n.a.	n.a.	n.a.	0.00	0.00
76.608	21.520	0.619	9267.9	5423.6	6.227	3.663	3.22		Clay	58.4			20.34	0.78	n.a.	n.a.	0.63	0.387	n.a.	n.a.	n.a.	n.a.	0.00	0.00
76.772	21.870	0.570	9287.6	5433.0	6.341	3.308	3.18		Clay	56.9			20.67	0.78	n.a.	n.a.	0.63	0.387	n.a.	n.a.	n.a.	n.a.	0.00	0.00
76.936	21.520	0.528	9307.3	5442.5	6.198	3.129	3.18		Clay	56.7			20.34	0.78	n.a.	n.a.	0.63	0.387	n.a.	n.a.	n.a.	n.a.	0.00	0.00
77.100	20.420	0.503	9327.0	5451.9	5.780	3.192	3.21		Clay	58.1			19.30	0.78	n.a.	n.a.	0.62	0.386	n.a.	n.a.	n.a.	n.a.	0.00	0.00
77.264	19.450	0.452	9346.7	5461.4	5.411	3.060	3.22		Clay	58.8			18.38	0.78	n.a.	n.a.	0.62	0.386	n.a.	n.a.	n.a.	n.a.	0.00	0.00
77.428	20.310	0.437	9366.3	5470.8	5.713	2.798	3.18		Clay	56.9			19.20	0.78	n.a.	n.a.	0.62	0.386	n.a.	n.a.	n.a.	n.a.	0.00	0.00
77.592	20.110	0.431	9386.0	5480.3	5.626	2.796	3.19		Clay	57.1			19.01	0.78	n.a.	n.a.	0.62	0.385	n.a.	n.a.	n.a.	n.a.	0.00	0.00
77.756	21.570	0.538	9405.7	5489.7	6.145	3.192	3.19		Clay	57.1			20.39	0.78	n.a.	n.a.	0.62	0.385	n.a.	n.a.	n.a.	n.a.	0.00	0.00
77.920	23.980	0.620	9425.4	5499.2	7.007	3.217	3.14		Clay	54.9			22.67	0.78	n.a.	n.a.	0.62	0.385	n.a.	n.a.	n.a.	n.a.	0.00	0.00
78.084	20.060	0.645	9445.1	5508.6	5.569	4.205	3.29		Clay	61.9			18.96	0.78	n.a.	n.a.	0.62	0.384	n.a.	n.a.	n.a.	n.a.	0.00	0.00
78.248	18.580	0.530	9464.8	5518.1	5.019	3.827	3.30		Clay	62.6			17.56	0.78	n.a.	n.a.	0.62	0.384	n.a.	n.a.	n.a.	n.a.	0.00	0.00
78.412	18.490	0.460	9484.4	5527.5	4.974	3.345	3.28		Clay	61.3			17.48	0.78	n.a.	n.a.	0.62	0.384	n.a.	n.a.	n.a.	n.a.	0.00	0.00
78.576	18.660	0.441	9504.1	5537.0	5.024	3.169	3.26		Clay	60.5			17.64	0.78	n.a.	n.a.	0.62	0.383	n.a.	n.a.	n.a.	n.a.	0.00	0.00
78.740	19.360	0.418	9523.8	5546.4	5.264	2.865	3.22		Clay	58.6			18.30	0.78	n.a.	n.a.	0.62	0.383	n.a.	n.a.	n.a.	n.a.	0.00	0.00
78.904	19.590	0.445	9543.5	5555.9	5.334	3.000	3.23		Clay	58.8			18.52	0.78	n.a.	n.a.	0.62	0.383	n.a.	n.a.	n.a.	n.a.	0.00	0.00
79.068	20.520	0.394	9563.2	5565.3	5.656	2.502	3.16		Clay	55.9			19.40	0.77	n.a.	n.a.	0.62	0.382	n.a.	n.a.	n.a.	n.a.	0.00	0.00
79.232	19.500	0.387	9582.9	5574.8	5.277	2.628	3.20		Clay	57.6			18.43	0.77	n.a.	n.a.	0.62	0.382	n.a.	n.a.	n.a.	n.a.	0.00	0.00
79.396	19.470	0.354	9602.6	5584.2	5.254	2.413	3.18		Clay	56.8			18.40	0.77	n.a.	n.a.	0.62	0.382	n.a.	n.a.	n.a.	n.a.	0.00	0.00
79.560	20.070	0.335	9622.2	5593.7	5.456	2.197	3.15		Clay	55.2			18.97	0.77	n.a.	n.a.	0.62	0.382	n.a.	n.a.	n.a.	n.a.	0.00	0.00
79.724	19.000	0.336	9641.9	5603.1	5.061	2.373	3.19		Clay	57.3			17.96	0.77	n.a.	n.a.	0.61	0.381	n.a.	n.a.	n.a.	n.a.	0.00	0.00
79.888	19.010	0.368	9661.6	5612.6	5.053	2.593	3.21		Clay	58.2			17.97	0.77	n.a.	n.a.	0.61	0.381	n.a.	n.a.	n.a.	n.a.	0.00	0.00
80.052	19.920	0.375	9681.3	5622.0	5.364	2.484	3.18		Clay	56.7			18.83	0.77	n.a.	n.a.	0.61	0.381	n.a.	n.a.	n.a.	n.a.	0.00	0.00
80.217	19.840	0.377	9701.0	5631.5	5.323	2.512	3.19		Clay	57.0			18.75	0.77	n.a.	n.a.	0.61	0.380	n.a.	n.a.	n.a.	n.a.	0.00	0.00

Depth (ft)	q <sub>c</sub> (tsf)	f <sub>s</sub> (tsf)	σ <sub>vc</sub> (psf)	In situ σ' <sub>vc</sub> (psf)	Q	F (%)	l <sub>c</sub>	Layer "Plastic" PI > 7	Flag Soil Type	Fines (%)	q <sub>c-N</sub> near interfaces (soft layer)	Thin Layer Factor (K <sub>ti</sub> )	Interpreted q <sub>c-N</sub>	C <sub>N</sub>	q <sub>c1-N</sub>	q <sub>c1-N-CS</sub>	Stress Reduction Coeff. r <sub>d</sub>	CSR	K <sub>σ</sub> for Sand	CRR <sub>M=7.5</sub> σ'vc = 1 atm	CRR	Factor of Safety (CRR/CSR)	Vertical Strain ε <sub>v</sub>	Settlement (Inches)
0.160	13.140	1.071	20.0	20.0	127.650	8.158	2.53		Unsaturated	31.3			12.42	1.70	21.11	57.47	1.00	0.325	1.100	n.a.	n.a.	n.a.	0.00	0.00
0.330	8.930	1.544	41.3	41.3	132.564	17.329	2.80		Unsaturated	40.9			8.44	1.70	14.35	49.51	1.00	0.325	1.100	n.a.	n.a.	n.a.	0.00	0.00
0.490	23.550	1.818	61.3	61.3	130.661	7.731	2.51		Unsaturated	30.5			22.26	1.70	37.84	79.63	1.00	0.325	1.100	n.a.	n.a.	n.a.	0.00	0.00
0.660	53.210	3.298	82.5	82.5	254.508	6.203	2.28		Unsaturated	23.8			50.29	1.70	85.50	138.83	1.00	0.325	1.100	n.a.	n.a.	n.a.	0.00	0.00
0.820	79.710	4.508	102.5	102.5	342.093	5.659	2.18		Unsaturated	21.3			75.34	1.70	128.08	190.81	1.00	0.325	1.100	n.a.	n.a.	n.a.	0.00	0.00
0.980	89.330	4.918	122.5	122.5	350.674	5.509	2.17		Unsaturated	20.9			84.43	1.70	143.54	210.01	1.00	0.325	1.100	n.a.	n.a.	n.a.	0.00	0.00
1.150	83.360	4.651	143.8	143.8	302.031	5.584	2.20		Unsaturated	21.8			78.79	1.70	133.94	199.26	1.00	0.325	1.100	n.a.	n.a.	n.a.	0.00	0.00
1.310	70.740	4.259	163.8	163.8	240.073	6.028	2.28		Unsaturated	23.8			66.86	1.70	113.67	175.77	1.00	0.325	1.100	n.a.	n.a.	n.a.	0.00	0.00
1.480	59.940	3.849	185.0	185.0	191.308	6.431	2.35		Unsaturated	25.8			56.65	1.70	96.31	154.97	1.00	0.325	1.100	n.a.	n.a.	n.a.	0.00	0.00
1.640	52.870	3.425	205.0	205.0	160.237	6.491	2.39		Unsaturated	27.1			49.97	1.70	84.95	140.85	1.00	0.325	1.100	n.a.	n.a.	n.a.	0.00	0.00
1.800	45.220	3.058	225.0	225.0	130.746	6.779	2.46		Unsaturated	29.0			42.74	1.70	72.66	125.55	1.00	0.325	1.100	n.a.	n.a.	n.a.	0.00	0.00
1.970	37.830	2.147	246.3	246.3	104.473	5.694	2.45		Unsaturated	28.8			35.76	1.70	60.79	109.64	1.00	0.325	1.100	n.a.	n.a.	n.a.	0.00	0.00
2.130	33.420	2.049	266.3	266.3	88.695	6.155	2.52		Unsaturated	31.0			31.59	1.70	53.70	100.98	1.00	0.325	1.100	n.a.	n.a.	n.a.	0.00	0.00
2.300	31.700	1.932	287.5	287.5	80.917	6.122	2.54		Unsaturated	31.7			29.96	1.70	50.94	97.49	1.00	0.325	1.100	n.a.	n.a.	n.a.	0.00	0.00
2.460	27.540	1.736	307.5	307.5	99.866	6.339	2.50		Unsaturated	30.3			26.03	1.70	44.25	88.15	1.00	0.325	1.100	n.a.	n.a.	n.a.	0.00	0.00
2.620	24.820	1.470	327.5	327.5	86.031	5.960	2.52		Unsaturated	30.9			23.46	1.70	39.88	82.47	1.00	0.325	1.100	n.a.	n.a.	n.a.	0.00	0.00
2.790	22.980	1.180	348.8	348.8	76.148	5.173	2.50		Unsaturated	30.4			21.72	1.70	36.92	78.38	1.00	0.325	1.100	n.a.	n.a.	n.a.	0.00	0.00
2.950	21.240	0.908	368.8	368.8	47.673	4.314	2.58		Unsaturated	32.9			20.08	1.70	34.13	75.24	1.00	0.324	1.100	n.a.	n.a.	n.a.	0.00	0.00
3.120	19.190	0.973	390.0	390.0	58.650	5.120	2.57		Unsaturated	32.7			18.14	1.70	30.83	70.78	1.00	0.324	1.100	n.a.	n.a.	n.a.	0.00	0.00
3.280	20.600	1.128	410.0	410.0	60.807	5.531	2.59		Unsaturated	33.2			19.47	1.70	33.10	73.92	1.00	0.324	1.100	n.a.	n.a.	n.a.	0.00	0.00
3.440	20.450	1.329	430.0	430.0	58.351	6.565	2.66		Unsaturated	35.5			19.33	1.70	32.86	73.97	1.00	0.324	1.100	n.a.	n.a.	n.a.	0.00	0.00
3.610	20.460	1.393	451.3	451.3	56.412	6.884	2.68		Unsaturated	36.4			19.34	1.70	32.88	74.11	1.00	0.324	1.100	n.a.	n.a.	n.a.	0.00	0.00
3.770	18.880	1.360	471.3	471.3	79.127	7.297	2.61		Unsaturated	33.9			17.84	1.70	30.34	70.34	1.00	0.324	1.100	n.a.	n.a.	n.a.	0.00	0.00
3.940	23.570	1.310	492.5	492.5	61.163	5.618	2.59		Unsaturated	33.3			22.28	1.70	37.87	80.34	0.99	0.323	1.100	n.a.	n.a.	n.a.	0.00	0.00
4.100	24.000	1.304	512.5	512.5	60.553	5.494	2.59		Unsaturated	33.1			22.68	1.70	38.56	81.24	0.99	0.323	1.100	n.a.	n.a.	n.a.	0.00	0.00
4.270	20.640	1.187	533.8	533.8	50.501	5.825	2.66		Unsaturated	35.5			19.51	1.70	33.16	74.39	0.99	0.323	1.100	n.a.	n.a.	n.a.	0.00	0.00
4.430	20.010	1.164	553.8	553.8	47.671	5.899	2.68		Unsaturated	36.3			18.91	1.70	32.15	73.12	0.99	0.323	1.100	n.a.	n.a.	n.a.	0.00	0.00
4.590	18.850	1.184	573.8	573.8	64.708	6.377	2.62		Unsaturated	34.2			17.82	1.70	30.29	70.32	0.99	0.323	1.100	n.a.	n.a.	n.a.	0.00	0.00
4.760	18.890	1.255	595.0	595.0	62.496	6.747	2.65		Unsaturated	35.1			17.85	1.70	30.35	70.56	0.99	0.322	1.100	n.a.	n.a.	n.a.	0.00	0.00
4.920	19.930	1.285	615.0	615.0	63.813	6.548	2.63		Unsaturated	34.6			18.84	1.70	32.02	72.72	0.99	0.322	1.100	n.a.	n.a.	n.a.	0.00	0.00
5.090	20.960	1.287	636.3	636.3	64.886	6.235	2.61		Unsaturated	33.9			19.81	1.70	33.68	74.83	0.99	0.322	1.100	n.a.	n.a.	n.a.	0.00	0.00
5.250	19.750	1.247	656.3	656.3	59.190	6.422	2.64		Unsaturated	35.1			18.67	1.70	31.73	72.41	0.99	0.322	1.100	n.a.	n.a.	n.a.	0.00	0.00
5.410	17.560	1.168	676.3	676.3	50.933	6.784	2.70		Unsaturated	37.2			16.60	1.70	28.22	67.93	0.99	0.322	1.094	n.a.	n.a.	n.a.	0.00	0.00
5.580	17.890	1.125	697.5	697.5	50.297	6.415	2.69		Unsaturated	36.7			16.91	1.70	28.75	68.59	0.99	0.321	1.092	n.a.	n.a.	n.a.	0.00	0.00
5.740	18.180	1.086	717.5	717.5	49.676	6.092	2.68		Unsaturated	36.2			17.18	1.70	29.21	69.16	0.99	0.321	1.090	n.a.	n.a.	n.a.	0.00	0.00
5.910	19.070	1.126	738.8	738.8	50.628	6.021	2.67		Unsaturated	35.9			18.02	1.70	30.64	71.04	0.99	0.321	1.089	n.a.	n.a.	n.a.	0.00	0.00
6.070	19.170	1.184	758.8	758.8	49.530	6.302	2.69		Unsaturated	36.6			18.12	1.70	30.80	71.35	0.99	0.321	1.087	n.a.	n.a.	n.a.	0.00	0.00
6.230	19.000	1.212	778.8	778.8	47.796	6.513	2.71		Unsaturated	37.4			17.96	1.70	30.53	71.06	0.99	0.321	1.085	n.a.	n.a.	n.a.	0.00	0.00
6.400	18.070	1.173	800.0	800.0	44.175	6.637	2.74		Unsaturated	38.4			17.08	1.70	29.03	69.15	0.99	0.321	1.081	n.a.	n.a.	n.a.	0.00	0.00
6.560	17.200	1.119	820.0	820.0	40.951	6.662	2.76		Clay	39.3			16.26	1.28	n.a.	n.a.	0.99	0.322	n.a.	n.a.	n.a.	n.a.	0.00	0.00
6.730	17.170	1.072	841.3	841.3	39.820	6.399	2.76		Clay	39.1			16.23	1.28	n.a.	n.a.	0.99	0.326	n.a.	n.a.	n.a.	n.a.	0.00	0.00
6.890	15.780	1.046	861.3	861.3	35.644	6.817	2.81		Clay	41.1			14.91	1.27	n.a.	n.a.	0.98	0.329	n.a.	n.a.	n.a.	n.a.	0.00	0.00
7.050	16.090	1.043	881.3	881.3	35.516	6.662	2.80		Clay	40.9			15.21	1.26	n.a.	n.a.	0.98	0.333	n.a.	n.a.	n.a.	n.a.	0.00	0.00
7.220	15.300	0.948	902.5	902.5	32.906	6.382	2.81		Clay	41.2			14.46	1.25	n.a.	n.a.	0.98	0.336	n.a.	n.a.	n.a.	n.a.	0.00	0.00
7.380	14.320	0.897	922.5	922.5	30.046	6.474	2.85		Clay	42.4			13.53	1.24	n.a.	n.a.	0.98	0.340	n.a.	n.a.	n.a.	n.a.	0.00	0.00
7.550	14.490	0.825	943.8	943.8	29.707	5.882	2.82		Clay	41.4			13.70	1.24	n.a.	n.a.	0.98	0.343	n.a.	n.a.	n.a.	n.a.	0.00	0.00
7.710	13.530	0.737	963.8	963.8	27.078	5.650	2.84		Clay	42.1			12.79	1.23	n.a.	n.a.	0.98	0.346	n.a.	n.a.	n.a.	n.a.	0.00	0.00
7.870	13.040	0.743	983.8	983.8	25.511	5.921	2.87		Clay	43.3			12.33	1.22	n.a.	n.a.	0.98	0.349	n.a.	n.a.	n.a.	n.a.	0.00	0.00
8.040	13.690	0.722	1005.0	1005.0	26.244	5.471	2.84		Clay	42.1			12.94	1.22	n.a.	n.a.	0.98	0.352	n.a.	n.a.	n.a.	n.a.	0.00	0.00
8.200	13.280	0.757	1025.0	1025.0	24.912	5.931	2.88		Clay	43.7			12.55	1.21	n.a.	n.a.	0.98	0.355	n.a.	n.a.	n.a.	n.a.	0.00	0.00
8.370	12.580	0.745	1046.3	1046.3	23.048	6.182	2.91		Clay	45.1			11.89	1.20	n.a.	n.a.	0.98	0.358	n.a.	n.a.	n.a.	n.a.	0.00	0.00
8.530	12.420	0.776	1066.3	1066.3	22.297	6.530	2.94		Clay	46.2			11.74	1.20	n.a.	n.a.	0.98	0.361	n.a.	n.a.	n.a.	n.a.	0.00	0.00
8.690	13.350	0.809	1086.3	1086.3	23.580	6.318	2.91		Clay	45.1			12.62	1.19	n.a.	n.a.	0.98	0.364	n.a.	n.a.	n.a.	n.a.	0.00	0.00
8.860	14.100	0.853	1107.5	1107.5	24.463	6.299	2.90		Clay	44.6			13.33	1.19	n.a.	n.a.	0.98	0.367	n.a.	n.a.	n.a.	n.a.	0.00	0.00
9.020	14.270	0.837	1127.5	1127.5	24.313	6.107	2.89		Clay	44.3			13.49	1.18	n.a.	n.a.	0.98	0.369</						

CPT No. 6

PGA ( $A_{max}$ ) 0.50

Total Settlement: 0.62 (Inches)

Depth (ft)	$q_c$ (tsf)	$f_s$ (tsf)	$\sigma_{vc}$ (psf)	In situ $\sigma'_{vc}$ (psf)	Q	F (%)	$l_c$	Layer "Plastic" PI > 7	Flag Soil Type	Fines (%)	$q_{c-N}$ near interfaces (soft layer)	Thin Layer Factor ( $K_{t1}$ )	Interpreted $q_{c-N}$	$C_N$	$q_{c1N}$	$q_{c1N-CS}$	Stress Reduction Coeff. $r_d$	CSR	$K_{\sigma}$ for Sand	CRRM=7.5, $r'_{vc} = 1 \text{ atm}$	CRR	Factor of Safety (CRR/CSR)	Vertical Strain $\epsilon_v$	Settlement (Inches)
10.660	13.210	0.729	1332.5	1332.5	18.827	5.810	2.96		Clay	47.0			12.49	1.13	n.a.	n.a.	0.97	0.393	n.a.	n.a.	n.a.	n.a.	0.00	0.00
10.830	13.420	0.684	1353.8	1353.8	18.826	5.371	2.94		Clay	46.1			12.68	1.13	n.a.	n.a.	0.97	0.395	n.a.	n.a.	n.a.	n.a.	0.00	0.00
10.990	13.270	0.696	1373.8	1373.8	18.319	5.530	2.95		Clay	46.8			12.54	1.12	n.a.	n.a.	0.97	0.397	n.a.	n.a.	n.a.	n.a.	0.00	0.00
11.150	13.820	0.758	1393.8	1393.8	18.831	5.775	2.96		Clay	46.9			13.06	1.12	n.a.	n.a.	0.97	0.399	n.a.	n.a.	n.a.	n.a.	0.00	0.00
11.320	14.380	0.735	1415.0	1415.0	19.325	5.379	2.93		Clay	45.7			13.59	1.11	n.a.	n.a.	0.97	0.401	n.a.	n.a.	n.a.	n.a.	0.00	0.00
11.480	19.180	0.637	1435.0	1435.0	25.732	3.451	2.71		Clay	37.3			18.13	1.11	n.a.	n.a.	0.97	0.403	n.a.	n.a.	n.a.	n.a.	0.00	0.00
11.650	22.190	0.644	1456.3	1456.3	29.476	2.998	2.62		Clay	34.4			20.97	1.10	n.a.	n.a.	0.97	0.405	n.a.	n.a.	n.a.	n.a.	0.00	0.00
11.810	15.820	0.694	1476.3	1476.3	20.433	4.600	2.87		Clay	43.2			14.95	1.10	n.a.	n.a.	0.96	0.406	n.a.	n.a.	n.a.	n.a.	0.00	0.00
11.980	10.670	0.655	1497.5	1497.5	13.250	6.597	3.11		Clay	53.5			10.09	1.10	n.a.	n.a.	0.96	0.408	n.a.	n.a.	n.a.	n.a.	0.00	0.00
12.140	9.500	0.616	1517.5	1517.5	11.521	7.044	3.17		Clay	56.4			8.98	1.09	n.a.	n.a.	0.96	0.410	n.a.	n.a.	n.a.	n.a.	0.00	0.00
12.300	8.520	0.557	1537.5	1537.5	10.083	7.183	3.22		Clay	58.7			8.05	1.09	n.a.	n.a.	0.96	0.412	n.a.	n.a.	n.a.	n.a.	0.00	0.00
12.470	7.760	0.544	1558.8	1558.8	8.957	7.799	3.29		Clay	61.7			7.33	1.08	n.a.	n.a.	0.96	0.413	n.a.	n.a.	n.a.	n.a.	0.00	0.00
12.630	7.550	0.543	1578.8	1578.8	8.565	8.035	3.31		Clay	62.9			7.14	1.08	n.a.	n.a.	0.96	0.415	n.a.	n.a.	n.a.	n.a.	0.00	0.00
12.800	7.620	0.598	1600.0	1600.0	8.525	8.761	3.34		Clay	64.2			7.20	1.08	n.a.	n.a.	0.96	0.416	n.a.	n.a.	n.a.	n.a.	0.00	0.00
12.960	7.260	0.620	1620.0	1620.0	7.963	9.614	3.38		Clay	66.6			6.86	1.07	n.a.	n.a.	0.96	0.418	n.a.	n.a.	n.a.	n.a.	0.00	0.00
13.120	7.190	0.591	1640.0	1640.0	7.768	9.283	3.38		Clay	66.5			6.80	1.07	n.a.	n.a.	0.96	0.419	n.a.	n.a.	n.a.	n.a.	0.00	0.00
13.290	7.220	0.589	1661.3	1661.3	7.692	9.222	3.38		Clay	66.6			6.82	1.07	n.a.	n.a.	0.96	0.421	n.a.	n.a.	n.a.	n.a.	0.00	0.00
13.450	7.730	0.609	1681.3	1681.3	8.196	8.846	3.35		Clay	65.0			7.31	1.06	n.a.	n.a.	0.96	0.422	n.a.	n.a.	n.a.	n.a.	0.00	0.00
13.620	8.360	0.611	1702.5	1702.5	8.821	8.140	3.30		Clay	62.6			7.90	1.06	n.a.	n.a.	0.96	0.424	n.a.	n.a.	n.a.	n.a.	0.00	0.00
13.780	8.540	0.615	1722.5	1722.5	8.916	8.014	3.30		Clay	62.2			8.07	1.06	n.a.	n.a.	0.96	0.425	n.a.	n.a.	n.a.	n.a.	0.00	0.00
13.940	10.350	0.628	1742.5	1742.5	10.879	6.626	3.18		Clay	56.5			9.78	1.05	n.a.	n.a.	0.96	0.427	n.a.	n.a.	n.a.	n.a.	0.00	0.00
14.110	12.060	0.719	1763.8	1763.8	12.675	6.436	3.12		Clay	53.8			11.40	1.05	n.a.	n.a.	0.95	0.428	n.a.	n.a.	n.a.	n.a.	0.00	0.00
14.270	13.750	0.799	1783.8	1783.8	14.417	6.217	3.07		Clay	51.5			13.00	1.05	n.a.	n.a.	0.95	0.429	n.a.	n.a.	n.a.	n.a.	0.00	0.00
14.440	14.820	0.861	1805.0	1805.0	15.421	6.186	3.04		Clay	50.5			14.01	1.04	n.a.	n.a.	0.95	0.430	n.a.	n.a.	n.a.	n.a.	0.00	0.00
14.600	15.360	0.916	1825.0	1825.0	15.833	6.341	3.04		Clay	50.4			14.52	1.04	n.a.	n.a.	0.95	0.432	n.a.	n.a.	n.a.	n.a.	0.00	0.00
14.760	14.770	0.913	1845.0	1845.0	15.011	6.593	3.07		Clay	51.7			13.96	1.04	n.a.	n.a.	0.95	0.433	n.a.	n.a.	n.a.	n.a.	0.00	0.00
14.930	13.860	0.856	1866.3	1866.3	13.853	6.619	3.10		Clay	52.9			13.10	1.03	n.a.	n.a.	0.95	0.434	n.a.	n.a.	n.a.	n.a.	0.00	0.00
15.090	13.330	0.798	1885.8	1880.2	13.176	6.445	3.11		Clay	53.3			12.60	1.03	n.a.	n.a.	0.95	0.435	n.a.	n.a.	n.a.	n.a.	0.00	0.00
15.260	13.240	0.742	1906.2	1890.0	13.002	6.037	3.09		Clay	52.7			12.51	1.03	n.a.	n.a.	0.95	0.436	n.a.	n.a.	n.a.	n.a.	0.00	0.00
15.420	12.360	0.726	1925.4	1899.2	12.002	6.372	3.13		Clay	54.5			11.68	1.03	n.a.	n.a.	0.95	0.438	n.a.	n.a.	n.a.	n.a.	0.00	0.00
15.580	11.050	0.700	1944.6	1908.4	10.561	6.948	3.20		Clay	57.6			10.44	1.03	n.a.	n.a.	0.95	0.439	n.a.	n.a.	n.a.	n.a.	0.00	0.00
15.750	10.060	0.708	1965.0	1918.2	9.465	7.796	3.27		Clay	60.9			9.51	1.03	n.a.	n.a.	0.95	0.440	n.a.	n.a.	n.a.	n.a.	0.00	0.00
15.910	10.710	0.669	1984.2	1927.4	10.084	6.887	3.21		Clay	58.2			10.12	1.02	n.a.	n.a.	0.95	0.441	n.a.	n.a.	n.a.	n.a.	0.00	0.00
16.080	10.800	0.626	2004.6	1937.2	10.115	6.392	3.19		Clay	57.2			10.21	1.02	n.a.	n.a.	0.95	0.442	n.a.	n.a.	n.a.	n.a.	0.00	0.00
16.240	10.450	0.593	2023.8	1946.4	9.698	6.283	3.20		Clay	57.6			9.88	1.02	n.a.	n.a.	0.94	0.443	n.a.	n.a.	n.a.	n.a.	0.00	0.00
16.400	9.870	0.598	2043.0	1955.6	9.049	6.759	3.24		Clay	59.7			9.33	1.02	n.a.	n.a.	0.94	0.444	n.a.	n.a.	n.a.	n.a.	0.00	0.00
16.570	10.250	0.585	2063.4	1965.4	9.380	6.347	3.21		Clay	58.3			9.69	1.02	n.a.	n.a.	0.94	0.445	n.a.	n.a.	n.a.	n.a.	0.00	0.00
16.730	9.640	0.519	2082.6	1974.6	8.709	6.032	3.23		Clay	58.8			9.11	1.02	n.a.	n.a.	0.94	0.446	n.a.	n.a.	n.a.	n.a.	0.00	0.00
16.900	9.180	0.499	2103.0	1984.4	8.192	6.133	3.25		Clay	60.0			8.68	1.02	n.a.	n.a.	0.94	0.447	n.a.	n.a.	n.a.	n.a.	0.00	0.00
17.060	8.070	0.380	2122.2	1993.7	7.031	5.416	3.27		Clay	61.0			7.63	1.02	n.a.	n.a.	0.94	0.447	n.a.	n.a.	n.a.	n.a.	0.00	0.00
17.220	7.170	0.339	2141.4	2002.9	6.091	5.563	3.33		Clay	63.8			6.78	1.01	n.a.	n.a.	0.94	0.448	n.a.	n.a.	n.a.	n.a.	0.00	0.00
17.390	7.220	0.283	2161.8	2012.7	6.100	4.615	3.28		Clay	61.4			6.82	1.01	n.a.	n.a.	0.94	0.449	n.a.	n.a.	n.a.	n.a.	0.00	0.00
17.550	7.050	0.294	2181.0	2021.9	5.895	4.937	3.31		Clay	62.9			6.66	1.01	n.a.	n.a.	0.94	0.450	n.a.	n.a.	n.a.	n.a.	0.00	0.00
17.720	7.060	0.317	2201.4	2031.7	5.866	5.321	3.33		Clay	63.9			6.67	1.01	n.a.	n.a.	0.94	0.451	n.a.	n.a.	n.a.	n.a.	0.00	0.00
17.880	8.220	0.409	2220.6	2040.9	6.967	5.757	3.29		Clay	61.9			7.77	1.01	n.a.	n.a.	0.94	0.452	n.a.	n.a.	n.a.	n.a.	0.00	0.00
18.040	9.220	0.500	2239.8	2050.1	7.902	6.168	3.26		Clay	60.7			8.71	1.01	n.a.	n.a.	0.94	0.452	n.a.	n.a.	n.a.	n.a.	0.00	0.00
18.210	9.520	0.544	2260.2	2059.9	8.146	6.486	3.27		Clay	60.8			9.00	1.01	n.a.	n.a.	0.93	0.453	n.a.	n.a.	n.a.	n.a.	0.00	0.00
18.370	10.520	0.599	2279.4	2069.1	9.067	6.381	3.23		Clay	58.9			9.94	1.01	n.a.	n.a.	0.93	0.454	n.a.	n.a.	n.a.	n.a.	0.00	0.00
18.540	10.340	0.570	2299.8	2078.9	8.841	6.203	3.23		Clay	58.9			9.77	1.00	n.a.	n.a.	0.93	0.455	n.a.	n.a.	n.a.	n.a.	0.00	0.00
18.700	10.060	0.556	2319.0	2088.1	8.525	6.241	3.24		Clay	59.6			9.51	1.00	n.a.	n.a.	0.93	0.455	n.a.	n.a.	n.a.	n.a.	0.00	0.00
18.860	10.170	0.564	2338.2	2097.3	8.583	6.269	3.24		Clay	59.5			9.61	1.00	n.a.	n.a.	0.93	0.456	n.a.	n.a.	n.a.	n.a.	0.00	0.00
19.030	9.370	0.541	2358.6	2107.1	7.774	6.603	3.29		Clay	61.8			8.86	1.00	n.a.	n.a.	0.93	0.457	n.a.	n.a.	n.a.	n.a.	0.00	0.00
19.190	10.000	0.504	2377.8	2116.3	8.327	5.714	3.23		Clay	58.9			9.45	1.00	n.a.	n.a.	0.93	0.457	n.a.	n.a.	n.a.	n.a.	0.00	0.00
19.360	10.300	0.577	2398.2	2126.1	8.561	6.338	3.24		Clay	59.7			9.74	1.00	n.a.	n.a.	0.93	0.458	n.a.	n.a.	n.a.	n.a.	0.00	0.00
19.520	10.790	0.631	2417.4	2135.4	8.974	6.582	3.24		Clay	59.5			10.20	1.00	n.a.	n.a.	0.93	0.459	n.a.	n.a.	n.a.	n.a.	0.00	0.00
19.690	10.340	0.538	2437.8	2145.1	8.504	5.901	3.23		Clay	58.9			9.77	1.00	n.a.	n.a.	0.93	0.459	n.a.	n.a.	n.a.	n.a.	0.00	0.00
19.850	9.640	0.484	2457.0	2154.4	7.809	5.753	3.25		Clay	60.0			9.11	1.00	n.a.	n.a.	0.93	0.460						

Depth (ft)	q <sub>c</sub> (tsf)	f <sub>s</sub> (tsf)	σ <sub>vc</sub> (psf)	Insitu σ'vc (psf)	Q	F (%)	lc	Layer "Plastic" PI > 7	Flag Soil Type	Fines (%)	Qc-N near interfaces (soft layer)	Thin Layer Factor (K <sub>tl</sub> )	Interpreted q <sub>cN</sub>	C <sub>N</sub>	q <sub>c1N</sub>	q <sub>c1N-CS</sub>	Stress Reduction Coeff. r <sub>d</sub>	CSR	K <sub>σ</sub> for Sand	CRR <sub>M=7.5</sub> σ'vc = 1 atm	CRR	Factor of Safety (CRR/CSR)	Vertical Strain ε <sub>v</sub>	Settlement (Inches)
21.160	6.760	0.437	2614.2	2229.8	4.891	8.012	3.50		Clay	72.7			6.39	0.99	n.a.	n.a.	0.92	0.464	n.a.	n.a.	n.a.	n.a.	0.00	0.00
21.330	6.640	0.404	2634.6	2239.6	4.753	7.586	3.49		Clay	72.4			6.28	0.99	n.a.	n.a.	0.92	0.465	n.a.	n.a.	n.a.	n.a.	0.00	0.00
21.490	7.250	0.392	2653.8	2248.8	5.268	6.616	3.42		Clay	68.7			6.85	0.98	n.a.	n.a.	0.92	0.465	n.a.	n.a.	n.a.	n.a.	0.00	0.00
21.650	7.600	0.408	2673.0	2258.0	5.548	6.517	3.40		Clay	67.5			7.18	0.98	n.a.	n.a.	0.92	0.465	n.a.	n.a.	n.a.	n.a.	0.00	0.00
21.820	9.300	0.395	2693.4	2267.8	7.014	4.966	3.25		Clay	59.9			8.79	0.98	n.a.	n.a.	0.92	0.466	n.a.	n.a.	n.a.	n.a.	0.00	0.00
21.980	9.460	0.369	2712.6	2277.0	7.118	4.551	3.22		Clay	58.6			8.94	0.98	n.a.	n.a.	0.92	0.466	n.a.	n.a.	n.a.	n.a.	0.00	0.00
22.150	8.300	0.402	2733.0	2286.8	6.064	5.801	3.34		Clay	64.4			7.84	0.98	n.a.	n.a.	0.91	0.467	n.a.	n.a.	n.a.	n.a.	0.00	0.00
22.310	8.450	0.455	2752.2	2296.1	6.162	6.436	3.36		Clay	65.5			7.99	0.98	n.a.	n.a.	0.91	0.467	n.a.	n.a.	n.a.	n.a.	0.00	0.00
22.470	8.810	0.467	2771.4	2305.3	6.441	6.296	3.34		Clay	64.4			8.33	0.98	n.a.	n.a.	0.91	0.467	n.a.	n.a.	n.a.	n.a.	0.00	0.00
22.640	8.560	0.477	2791.8	2315.1	6.189	6.651	3.37		Clay	65.8			8.09	0.98	n.a.	n.a.	0.91	0.468	n.a.	n.a.	n.a.	n.a.	0.00	0.00
22.800	8.700	0.459	2811.0	2324.3	6.277	6.292	3.35		Clay	64.9			8.22	0.98	n.a.	n.a.	0.91	0.468	n.a.	n.a.	n.a.	n.a.	0.00	0.00
22.970	8.260	0.452	2831.4	2334.1	5.865	6.598	3.39		Clay	66.7			7.81	0.97	n.a.	n.a.	0.91	0.469	n.a.	n.a.	n.a.	n.a.	0.00	0.00
23.130	8.210	0.471	2850.6	2343.3	5.791	6.935	3.40		Clay	67.6			7.76	0.97	n.a.	n.a.	0.91	0.469	n.a.	n.a.	n.a.	n.a.	0.00	0.00
23.290	8.590	0.500	2869.8	2352.5	6.083	6.991	3.39		Clay	66.8			8.12	0.97	n.a.	n.a.	0.91	0.469	n.a.	n.a.	n.a.	n.a.	0.00	0.00
23.460	8.780	0.524	2890.2	2362.3	6.210	7.147	3.39		Clay	66.8			8.30	0.97	n.a.	n.a.	0.91	0.470	n.a.	n.a.	n.a.	n.a.	0.00	0.00
23.620	9.250	0.532	2909.4	2371.5	6.574	6.827	3.35		Clay	65.1			8.74	0.97	n.a.	n.a.	0.91	0.470	n.a.	n.a.	n.a.	n.a.	0.00	0.00
23.790	9.430	0.567	2929.8	2381.3	6.690	7.114	3.36		Clay	65.4			8.91	0.97	n.a.	n.a.	0.91	0.470	n.a.	n.a.	n.a.	n.a.	0.00	0.00
23.950	10.250	0.587	2949.0	2390.5	7.342	6.687	3.31		Clay	63.0			9.69	0.97	n.a.	n.a.	0.91	0.470	n.a.	n.a.	n.a.	n.a.	0.00	0.00
24.110	10.660	0.564	2968.2	2399.7	7.647	6.147	3.27		Clay	61.2			10.08	0.97	n.a.	n.a.	0.90	0.471	n.a.	n.a.	n.a.	n.a.	0.00	0.00
24.280	11.060	0.587	2988.6	2409.5	7.940	6.140	3.26		Clay	60.5			10.45	0.97	n.a.	n.a.	0.90	0.471	n.a.	n.a.	n.a.	n.a.	0.00	0.00
24.440	10.760	0.584	3007.8	2418.7	7.654	6.314	3.28		Clay	61.5			10.17	0.97	n.a.	n.a.	0.90	0.471	n.a.	n.a.	n.a.	n.a.	0.00	0.00
24.610	11.050	0.531	3028.2	2428.5	7.853	5.567	3.24		Clay	59.5			10.44	0.96	n.a.	n.a.	0.90	0.472	n.a.	n.a.	n.a.	n.a.	0.00	0.00
24.770	10.990	0.480	3047.4	2437.8	7.766	5.075	3.22		Clay	58.5			10.39	0.96	n.a.	n.a.	0.90	0.472	n.a.	n.a.	n.a.	n.a.	0.00	0.00
24.930	11.290	0.494	3066.6	2447.0	7.975	5.063	3.21		Clay	58.1			10.67	0.96	n.a.	n.a.	0.90	0.472	n.a.	n.a.	n.a.	n.a.	0.00	0.00
25.100	11.190	0.506	3087.0	2456.8	7.853	5.241	3.22		Clay	58.7			10.58	0.96	n.a.	n.a.	0.90	0.472	n.a.	n.a.	n.a.	n.a.	0.00	0.00
25.260	11.580	0.502	3106.2	2466.0	8.132	5.005	3.20		Clay	57.6			10.95	0.96	n.a.	n.a.	0.90	0.472	n.a.	n.a.	n.a.	n.a.	0.00	0.00
25.430	11.800	0.527	3126.6	2475.8	8.270	5.148	3.20		Clay	57.7			11.15	0.96	n.a.	n.a.	0.90	0.473	n.a.	n.a.	n.a.	n.a.	0.00	0.00
25.590	11.270	0.501	3145.8	2485.0	7.805	5.168	3.22		Clay	58.7			10.65	0.96	n.a.	n.a.	0.90	0.473	n.a.	n.a.	n.a.	n.a.	0.00	0.00
25.750	12.450	0.532	3165.0	2494.2	8.714	4.898	3.17		Clay	56.2			11.77	0.96	n.a.	n.a.	0.90	0.473	n.a.	n.a.	n.a.	n.a.	0.00	0.00
25.920	12.950	0.602	3185.4	2504.0	9.071	5.298	3.18		Clay	56.5			12.24	0.96	n.a.	n.a.	0.89	0.473	n.a.	n.a.	n.a.	n.a.	0.00	0.00
26.080	12.700	0.570	3204.6	2513.2	8.832	5.133	3.18		Clay	56.6			12.00	0.96	n.a.	n.a.	0.89	0.473	n.a.	n.a.	n.a.	n.a.	0.00	0.00
26.250	12.620	0.552	3225.0	2523.0	8.726	5.014	3.18		Clay	56.5			11.93	0.95	n.a.	n.a.	0.89	0.474	n.a.	n.a.	n.a.	n.a.	0.00	0.00
26.410	12.750	0.534	3244.2	2532.2	8.789	4.794	3.16		Clay	55.8			12.05	0.95	n.a.	n.a.	0.89	0.474	n.a.	n.a.	n.a.	n.a.	0.00	0.00
26.570	13.030	0.523	3263.4	2541.4	8.970	4.587	3.14		Clay	55.0			12.32	0.95	n.a.	n.a.	0.89	0.474	n.a.	n.a.	n.a.	n.a.	0.00	0.00
26.740	12.160	0.528	3283.8	2551.2	8.246	5.022	3.20		Clay	57.4			11.49	0.95	n.a.	n.a.	0.89	0.474	n.a.	n.a.	n.a.	n.a.	0.00	0.00
26.900	10.810	0.538	3303.0	2560.4	7.154	5.872	3.29		Clay	61.7			10.22	0.95	n.a.	n.a.	0.89	0.474	n.a.	n.a.	n.a.	n.a.	0.00	0.00
27.070	10.380	0.484	3323.4	2570.2	6.784	5.546	3.29		Clay	61.9			9.81	0.95	n.a.	n.a.	0.89	0.474	n.a.	n.a.	n.a.	n.a.	0.00	0.00
27.230	10.960	0.489	3342.6	2579.4	7.202	5.263	3.25		Clay	60.2			10.36	0.95	n.a.	n.a.	0.89	0.474	n.a.	n.a.	n.a.	n.a.	0.00	0.00
27.400	12.420	0.532	3363.0	2589.2	8.295	4.957	3.19		Clay	57.2			11.74	0.95	n.a.	n.a.	0.89	0.474	n.a.	n.a.	n.a.	n.a.	0.00	0.00
27.560	12.770	0.527	3382.2	2598.5	8.527	4.756	3.17		Clay	56.2			12.07	0.95	n.a.	n.a.	0.89	0.475	n.a.	n.a.	n.a.	n.a.	0.00	0.00
27.720	12.550	0.466	3401.4	2607.7	8.321	4.292	3.15		Clay	55.4			11.86	0.95	n.a.	n.a.	0.88	0.475	n.a.	n.a.	n.a.	n.a.	0.00	0.00
27.890	11.590	0.450	3421.8	2617.5	7.549	4.552	3.20		Clay	57.7			10.95	0.95	n.a.	n.a.	0.88	0.475	n.a.	n.a.	n.a.	n.a.	0.00	0.00
28.050	11.310	0.459	3441.0	2626.7	7.302	4.781	3.23		Clay	58.8			10.69	0.94	n.a.	n.a.	0.88	0.475	n.a.	n.a.	n.a.	n.a.	0.00	0.00
28.220	11.000	0.453	3461.4	2636.5	7.032	4.884	3.24		Clay	59.7			10.40	0.94	n.a.	n.a.	0.88	0.475	n.a.	n.a.	n.a.	n.a.	0.00	0.00
28.380	10.800	0.429	3480.6	2645.7	6.849	4.732	3.25		Clay	59.8			10.21	0.94	n.a.	n.a.	0.88	0.475	n.a.	n.a.	n.a.	n.a.	0.00	0.00
28.540	10.560	0.481	3499.8	2654.9	6.637	5.464	3.29		Clay	62.1			9.98	0.94	n.a.	n.a.	0.88	0.475	n.a.	n.a.	n.a.	n.a.	0.00	0.00
28.710	11.290	0.566	3520.2	2664.7	7.153	5.941	3.29		Clay	61.9			10.67	0.94	n.a.	n.a.	0.88	0.475	n.a.	n.a.	n.a.	n.a.	0.00	0.00
28.870	11.870	0.564	3539.4	2673.9	7.555	5.586	3.25		Clay	60.2			11.22	0.94	n.a.	n.a.	0.88	0.475	n.a.	n.a.	n.a.	n.a.	0.00	0.00
29.040	12.360	0.605	3559.8	2683.7	7.885	5.715	3.24		Clay	59.7			11.68	0.94	n.a.	n.a.	0.88	0.475	n.a.	n.a.	n.a.	n.a.	0.00	0.00
29.200	13.440	0.590	3579.0	2692.9	8.653	5.063	3.18		Clay	56.7			12.70	0.94	n.a.	n.a.	0.88	0.475	n.a.	n.a.	n.a.	n.a.	0.00	0.00
29.360	13.540	0.602	3598.2	2702.1	8.690	5.127	3.18		Clay	56.8			12.80	0.94	n.a.	n.a.	0.88	0.475	n.a.	n.a.	n.a.	n.a.	0.00	0.00
29.530	12.830	0.573	3618.6	2711.9	8.128	5.197	3.21		Clay	58.1			12.13	0.94	n.a.	n.a.	0.87	0.475	n.a.	n.a.	n.a.	n.a.	0.00	0.00
29.690	13.310	0.649	3637.8	2721.1	8.446	5.650	3.22		Clay	58.5			12.58	0.94	n.a.	n.a.	0.87	0.475	n.a.	n.a.	n.a.	n.a.	0.00	0.00
29.860	13.930	0.620	3658.2	2730.9	8.862	5.124	3.18		Clay	56.5			13.17	0.93	n.a.	n.a.	0.87	0.475	n.a.	n.a.	n.a.	n.a.	0.00	0.00
30.020	13.770	0.615	3677.4	2740.2	8.708	5.155	3.18		Clay	56.8			13.02	0.93	n.a.	n.a.	0.87	0.475	n.a.	n.a.	n.a.	n.a.	0.00	0.00
30.180	14.340	0.572	3696.6	2749.4	9.087	4.577	3.14		Clay	54.7			13.55	0.93	n.a.	n.a.	0.87	0.475	n.a.	n.a.	n.a.	n.a.	0.00	0.00
30.350	14.500	0.566	3717.0	2759.2	9.163	4.477	3.13		Clay	54.3			13.71	0.93	n.a.	n.a.	0.87	0.475	n.a.	n.a.	n.a.	n.a.</		

Depth (ft)	q <sub>c</sub> (tsf)	f <sub>s</sub> (tsf)	σ <sub>vc</sub> (psf)	In situ σ'vc (psf)	Q	F (%)	lc	Layer "Plastic" PI > 7	Flag Soil Type	Fines (%)	Q <sub>N</sub> near interfaces (soft layer)	Thin Layer Factor (K <sub>tl</sub> )	Interpreted q <sub>cN</sub>	C <sub>N</sub>	q <sub>c1N</sub>	q <sub>c1N-CS</sub>	Stress Reduction Coeff. r <sub>d</sub>	CSR	K <sub>σ</sub> for Sand	CRRM=7.5, σ'vc = 1 atm	CRR	Factor of Safety (CRR/CSR)	Vertical Strain ε <sub>v</sub>	Settlement (Inches)
31.660	13.810	0.421	3874.2	2834.6	8.377	3.548	3.10		Clay	53.1			13.05	0.93	n.a.	n.a.	0.86	0.475	n.a.	n.a.	n.a.	n.a.	0.00	0.00
31.820	12.990	0.222	3893.4	2843.8	7.766	2.008	3.00		Clay	48.5			12.28	0.92	n.a.	n.a.	0.86	0.475	n.a.	n.a.	n.a.	n.a.	0.00	0.00
31.990	12.060	0.494	3913.8	2853.6	7.081	4.893	3.24		Clay	59.6			11.40	0.92	n.a.	n.a.	0.86	0.475	n.a.	n.a.	n.a.	n.a.	0.00	0.00
32.150	24.950	1.143	3933.0	2862.8	16.056	4.971	2.97		Clay	47.3			23.58	0.92	n.a.	n.a.	0.86	0.475	n.a.	n.a.	n.a.	n.a.	0.00	0.00
32.320	95.450	1.319	3953.4	2872.6	75.826	1.411	2.10		Sand	19.2		1.8	162.39	0.91	147.47	210.96	0.86	0.475	0.908	2.003	2.131	4.49	0.00	0.00
32.480	100.150	1.416	3972.6	2881.8	79.504	1.442	2.09		Sand	19.0		1.8	170.39	0.91	155.13	220.07	0.86	0.475	0.907	2.000	2.126	4.48	0.00	0.00
32.640	66.660	1.415	3991.8	2891.1	52.289	2.188	2.35		Sand	25.7	95	1.8	171.00	0.91	156.37	234.14	0.86	0.474	0.906	2.000	2.123	4.48	0.00	0.00
32.810	40.430	1.526	4012.2	2900.9	26.491	3.972	2.74		Clay	38.4			38.21	0.92	n.a.	n.a.	0.86	0.474	n.a.	n.a.	n.a.	n.a.	0.00	0.00
32.970	20.700	1.308	4031.4	2910.1	12.841	6.998	3.14		Clay	54.7			19.57	0.92	n.a.	n.a.	0.86	0.474	n.a.	n.a.	n.a.	n.a.	0.00	0.00
33.140	18.310	1.190	4051.8	2919.9	11.154	7.305	3.20		Clay	57.4			17.31	0.92	n.a.	n.a.	0.85	0.474	n.a.	n.a.	n.a.	n.a.	0.00	0.00
33.300	32.570	1.678	4071.0	2929.1	20.849	5.496	2.91		Clay	45.0			30.78	0.92	n.a.	n.a.	0.85	0.474	n.a.	n.a.	n.a.	n.a.	0.00	0.00
33.460	75.080	1.595	4090.2	2938.3	58.581	2.184	2.31		Sand	24.6	133		133.00	0.89	118.45	183.02	0.85	0.474	0.928	0.589	0.640	1.35	0.00	0.00
33.630	133.100	3.269	4110.6	2948.1	104.935	2.495	2.17		Sand	21.0			125.80	0.88	111.12	168.35	0.85	0.474	0.937	0.392	0.430	0.91	0.01	0.02
33.790	153.010	3.423	4129.8	2957.3	120.682	2.268	2.10		Sand	19.3			144.62	0.89	128.77	187.26	0.85	0.474	0.924	0.680	0.735	1.55	0.00	0.00
33.960	127.170	3.310	4150.2	2967.1	99.850	2.646	2.20		Sand	21.9			120.20	0.88	105.60	162.62	0.85	0.474	0.939	0.344	0.379	0.80	0.01	0.02
34.120	114.370	3.235	4169.4	2976.3	89.486	2.881	2.26		Sand	23.4			108.10	0.87	94.20	149.84	0.85	0.473	0.946	0.271	0.300	0.63	0.02	0.04
34.280	111.410	3.297	4188.6	2985.5	86.985	3.016	2.29		Sand	24.1			105.30	0.87	91.50	146.98	0.85	0.473	0.946	0.258	0.286	0.60	0.02	0.04
34.450	138.850	3.229	4209.0	2995.3	108.633	2.361	2.14		Sand	20.3			131.24	0.88	115.49	172.66	0.85	0.473	0.932	0.436	0.476	1.01	0.01	0.01
34.610	142.140	2.788	4228.2	3004.5	111.069	1.991	2.08		Sand	18.9			134.35	0.88	118.09	172.66	0.85	0.473	0.931	0.436	0.475	1.00	0.01	0.02
34.780	134.060	2.389	4248.6	3014.3	104.481	1.811	2.07		Sand	18.6			126.71	0.87	110.64	162.57	0.84	0.473	0.937	0.344	0.377	0.80	0.01	0.02
34.940	105.050	2.419	4267.8	3023.5	81.376	2.351	2.23		Sand	22.5			99.29	0.86	85.31	137.10	0.84	0.473	0.949	0.223	0.248	0.52	0.02	0.04
35.100	107.910	2.198	4287.0	3032.8	83.503	2.078	2.18		Sand	21.3			101.99	0.86	87.59	138.43	0.84	0.473	0.948	0.227	0.252	0.53	0.02	0.05
35.270	103.210	1.965	4307.4	3042.6	79.656	1.944	2.18		Sand	21.2			97.55	0.85	83.36	132.75	0.84	0.472	0.950	0.210	0.234	0.50	0.02	0.05
35.430	99.670	1.996	4326.6	3051.8	76.742	2.047	2.20		Sand	21.8			94.21	0.85	80.23	129.68	0.84	0.472	0.951	0.202	0.225	0.48	0.02	0.05
35.600	94.910	2.034	4347.0	3061.6	72.870	2.193	2.24		Sand	22.8			89.71	0.85	76.07	125.46	0.84	0.472	0.952	0.192	0.214	0.45	0.03	0.05
35.760	102.320	2.019	4366.2	3070.8	78.567	2.016	2.19		Sand	21.5			96.71	0.85	82.26	131.90	0.84	0.472	0.949	0.208	0.231	0.49	0.02	0.05
35.930	109.090	2.474	4386.6	3080.6	83.738	2.314	2.21		Sand	22.1			103.11	0.85	88.07	140.23	0.84	0.472	0.945	0.233	0.258	0.55	0.02	0.04
36.090	116.170	2.650	4405.8	3089.8	89.143	2.325	2.20		Sand	21.7			109.80	0.86	94.10	147.42	0.84	0.472	0.941	0.260	0.287	0.61	0.02	0.04
36.250	125.980	2.124	4425.0	3099.0	96.665	1.716	2.08		Sand	18.8			119.07	0.86	102.24	152.37	0.84	0.471	0.938	0.283	0.310	0.66	0.02	0.04
36.420	155.200	1.443	4445.4	3108.8	119.290	0.943	1.84		Sand	13.6			146.69	0.86	126.63	163.14	0.84	0.471	0.931	0.348	0.380	0.81	0.01	0.02
36.580	192.120	1.340	4464.6	3118.0	147.853	0.706	1.68		Sand	10.8			181.59	0.87	158.26	181.76	0.83	0.471	0.916	0.566	0.807	1.29	0.00	0.01
36.750	217.500	1.883	4485.0	3127.8	167.344	0.875	1.70		Sand	11.2			205.58	0.88	181.68	210.21	0.83	0.471	0.884	1.919	1.987	4.22	0.00	0.00
36.910	249.360	2.705	4504.2	3137.0	191.823	1.095	1.73		Sand	11.7			235.69	0.90	211.83	247.52	0.83	0.471	0.882	2.000	2.066	4.39	0.00	0.00
37.070	295.870	3.098	4523.4	3146.2	227.586	1.055	1.67		Sand	10.6			279.65	0.90	251.86	282.00	0.83	0.471	0.881	2.000	2.064	4.39	0.00	0.00
37.240	337.760	1.922	4543.8	3156.0	259.645	0.573	1.44		Sand	7.2			319.24	0.90	287.29	291.34	0.83	0.470	0.880	2.000	2.062	4.38	0.00	0.00
37.400	309.590	1.590	4563.0	3165.2	237.489	0.517	1.44		Sand	7.2	320		320.00	0.90	287.75	291.78	0.83	0.470	0.879	2.000	2.060	4.38	0.00	0.00
37.570	309.060	1.816	4583.4	3175.0	236.706	0.592	1.48		Sand	7.7	320		320.00	0.90	287.51	294.37	0.83	0.470	0.878	2.000	2.058	4.38	0.00	0.00
37.730	294.020	1.219	4602.6	3184.2	224.767	0.418	1.40		Sand	6.7	320		320.00	0.90	287.29	289.43	0.83	0.470	0.877	2.000	2.056	4.38	0.00	0.00
37.890	247.340	0.846	4621.8	3193.5	188.521	0.345	1.41		Sand	6.9	320		320.00	0.90	287.07	289.86	0.83	0.469	0.877	2.000	2.054	4.37	0.00	0.00
38.060	160.120	1.607	4642.2	3203.3	121.222	1.018	1.85		Sand	13.9	320		320.00	0.90	286.84	353.74	0.83	0.469	0.876	2.000	2.051	4.37	0.00	0.00
38.220	82.010	1.662	4661.4	3212.5	61.122	2.086	2.28		Sand	23.9	320		320.00	0.90	286.62	402.63	0.82	0.469	0.875	2.000	2.049	4.37	0.00	0.00
38.390	44.020	1.575	4681.8	3222.3	25.869	3.778	2.73		Clay	38.2			41.61	0.89	n.a.	n.a.	0.82	0.469	n.a.	n.a.	n.a.	n.a.	0.00	0.00
38.550	30.850	0.829	4701.0	3231.5	17.639	2.907	2.79		Clay	40.3			29.16	0.89	n.a.	n.a.	0.82	0.469	n.a.	n.a.	n.a.	n.a.	0.00	0.00
38.710	25.880	0.343	4720.2	3240.7	14.515	1.457	2.69		Clay	36.7			24.46	0.89	n.a.	n.a.	0.82	0.468	n.a.	n.a.	n.a.	n.a.	0.00	0.00
38.880	15.960	0.325	4740.6	3250.5	8.362	2.391	3.01		Clay	49.0			15.09	0.89	n.a.	n.a.	0.82	0.468	n.a.	n.a.	n.a.	n.a.	0.00	0.00
39.040	10.540	0.457	4759.8	3259.7	5.007	5.596	3.40		Clay	67.4			9.96	0.89	n.a.	n.a.	0.82	0.468	n.a.	n.a.	n.a.	n.a.	0.00	0.00
39.210	14.760	0.519	4780.2	3269.5	7.567	4.199	3.18		Clay	56.7			13.95	0.89	n.a.	n.a.	0.82	0.468	n.a.	n.a.	n.a.	n.a.	0.00	0.00
39.370	17.850	0.651	4799.4	3278.7	9.425	4.211	3.10		Clay	53.2			16.87	0.89	n.a.	n.a.	0.82	0.467	n.a.	n.a.	n.a.	n.a.	0.00	0.00
39.530	22.100	1.038	4818.6	3287.9	11.978	5.274	3.08		Clay	52.2			20.89	0.89	n.a.	n.a.	0.82	0.467	n.a.	n.a.	n.a.	n.a.	0.00	0.00
39.700	31.360	1.385	4839.0	3297.7	17.552	4.786	2.93		Clay	45.7			29.64	0.89	n.a.	n.a.	0.82	0.467	n.a.	n.a.	n.a.	n.a.	0.00	0.00
39.860	34.000	1.101	4858.2	3306.9	19.094	3.486	2.81		Clay	41.1			32.14	0.89	n.a.	n.a.	0.82	0.467	n.a.	n.a.	n.a.	n.a.	0.00	0.00
40.030	17.420	0.742	4878.6	3316.7	9.033	4.952	3.16		Clay	55.8			16.47	0.89	n.a.	n.a.	0.81	0.466	n.a.	n.a.	n.a.	n.a.	0.00	0.00
40.190	15.440	0.645	4897.8																					

CPT No. 6

PGA ( $A_{max}$ ) 0.50

Total Settlement: 0.62 (Inches)

Depth (ft)	$q_c$ (tsf)	$f_s$ (tsf)	$\sigma_{vc}$ (psf)	In situ $\sigma'_{vc}$ (psf)	Q	F (%)	$l_c$	Layer "Plastic" $PI > 7$	Flag Soil Type	Fines (%)	$q_{c-N}$ near interfaces (soft layer)	Thin Layer Factor ( $K_{t1}$ )	Interpreted $q_{c-N}$	$C_N$	$q_{c1N}$	$q_{c1N-CS}$	Stress Reduction Coeff. $r_d$	CSR	$K_{cs}$ for Sand	$CRR_{M=7.5}$ $r'_{vc} = 1 \text{ atm}$	CRR	Factor of Safety (CRR/CSR)	Vertical Strain $\epsilon_v$	Settlement (Inches)
42.160	11.580	0.297	5134.2	3439.4	5.241	3.299	3.25		Clay	60.2			10.95	0.88	n.a.	n.a.	0.80	0.463	n.a.	n.a.	n.a.	n.a.	0.00	0.00
42.320	12.330	0.343	5153.4	3448.6	5.656	3.514	3.24		Clay	59.5			11.65	0.88	n.a.	n.a.	0.80	0.463	n.a.	n.a.	n.a.	n.a.	0.00	0.00
42.490	11.930	0.477	5173.8	3458.4	5.403	5.102	3.35		Clay	64.8			11.28	0.88	n.a.	n.a.	0.80	0.462	n.a.	n.a.	n.a.	n.a.	0.00	0.00
42.650	13.140	0.435	5193.0	3467.6	6.081	4.123	3.25		Clay	60.1			12.42	0.88	n.a.	n.a.	0.80	0.462	n.a.	n.a.	n.a.	n.a.	0.00	0.00
42.810	14.430	0.452	5212.2	3476.9	6.801	3.820	3.19		Clay	57.3			13.64	0.88	n.a.	n.a.	0.80	0.462	n.a.	n.a.	n.a.	n.a.	0.00	0.00
42.980	11.890	0.494	5232.6	3486.6	5.320	5.328	3.36		Clay	65.6			11.24	0.88	n.a.	n.a.	0.80	0.461	n.a.	n.a.	n.a.	n.a.	0.00	0.00
43.140	12.450	0.473	5251.8	3495.9	5.620	4.815	3.32		Clay	63.4			11.77	0.88	n.a.	n.a.	0.80	0.461	n.a.	n.a.	n.a.	n.a.	0.00	0.00
43.310	12.210	0.421	5272.2	3505.7	5.462	4.399	3.31		Clay	62.8			11.54	0.88	n.a.	n.a.	0.80	0.461	n.a.	n.a.	n.a.	n.a.	0.00	0.00
43.470	11.970	0.409	5291.4	3514.9	5.306	4.385	3.32		Clay	63.3			11.31	0.87	n.a.	n.a.	0.79	0.461	n.a.	n.a.	n.a.	n.a.	0.00	0.00
43.640	12.170	0.415	5311.8	3524.7	5.399	4.364	3.31		Clay	62.9			11.50	0.87	n.a.	n.a.	0.79	0.460	n.a.	n.a.	n.a.	n.a.	0.00	0.00
43.800	12.420	0.420	5331.0	3533.9	5.521	4.305	3.30		Clay	62.3			11.74	0.87	n.a.	n.a.	0.79	0.460	n.a.	n.a.	n.a.	n.a.	0.00	0.00
43.960	12.590	0.388	5350.2	3543.1	5.597	3.908	3.27		Clay	61.0			11.90	0.87	n.a.	n.a.	0.79	0.460	n.a.	n.a.	n.a.	n.a.	0.00	0.00
44.130	12.250	0.364	5370.6	3552.9	5.384	3.801	3.28		Clay	61.3			11.58	0.87	n.a.	n.a.	0.79	0.459	n.a.	n.a.	n.a.	n.a.	0.00	0.00
44.290	11.930	0.306	5389.8	3562.1	5.185	3.312	3.26		Clay	60.4			11.28	0.87	n.a.	n.a.	0.79	0.459	n.a.	n.a.	n.a.	n.a.	0.00	0.00
44.460	11.300	0.290	5410.2	3571.9	4.813	3.379	3.29		Clay	62.0			10.68	0.87	n.a.	n.a.	0.79	0.459	n.a.	n.a.	n.a.	n.a.	0.00	0.00
44.620	11.200	0.325	5429.4	3581.1	4.739	3.833	3.33		Clay	63.7			10.59	0.87	n.a.	n.a.	0.79	0.458	n.a.	n.a.	n.a.	n.a.	0.00	0.00
44.780	12.210	0.398	5448.6	3590.3	5.284	4.198	3.31		Clay	62.8			11.54	0.87	n.a.	n.a.	0.79	0.458	n.a.	n.a.	n.a.	n.a.	0.00	0.00
44.950	13.400	0.481	5469.0	3600.1	5.925	4.512	3.28		Clay	61.7			12.67	0.87	n.a.	n.a.	0.79	0.458	n.a.	n.a.	n.a.	n.a.	0.00	0.00
45.110	14.630	0.634	5488.2	3609.3	6.586	5.332	3.29		Clay	61.9			13.83	0.87	n.a.	n.a.	0.78	0.457	n.a.	n.a.	n.a.	n.a.	0.00	0.00
45.280	17.520	0.701	5508.6	3619.1	8.160	4.747	3.18		Clay	56.9			16.56	0.87	n.a.	n.a.	0.78	0.457	n.a.	n.a.	n.a.	n.a.	0.00	0.00
45.440	17.310	0.734	5527.8	3628.3	8.018	5.043	3.21		Clay	57.9			16.36	0.87	n.a.	n.a.	0.78	0.457	n.a.	n.a.	n.a.	n.a.	0.00	0.00
45.600	16.160	0.611	5547.0	3637.6	7.360	4.566	3.21		Clay	58.1			15.27	0.87	n.a.	n.a.	0.78	0.457	n.a.	n.a.	n.a.	n.a.	0.00	0.00
45.770	15.110	0.444	5567.4	3647.4	6.759	3.602	3.18		Clay	58.8			14.28	0.87	n.a.	n.a.	0.78	0.456	n.a.	n.a.	n.a.	n.a.	0.00	0.00
45.930	15.120	0.612	5586.6	3656.6	6.742	4.962	3.26		Clay	60.6			14.29	0.87	n.a.	n.a.	0.78	0.456	n.a.	n.a.	n.a.	n.a.	0.00	0.00
46.100	18.280	0.621	5607.0	3666.4	8.442	4.013	3.13		Clay	54.4			17.28	0.87	n.a.	n.a.	0.78	0.456	n.a.	n.a.	n.a.	n.a.	0.00	0.00
46.260	20.370	0.593	5626.2	3675.6	9.553	3.376	3.04		Clay	50.5			19.25	0.86	n.a.	n.a.	0.78	0.455	n.a.	n.a.	n.a.	n.a.	0.00	0.00
46.420	21.690	0.779	5645.4	3684.8	10.241	4.130	3.07		Clay	51.7			20.50	0.86	n.a.	n.a.	0.78	0.455	n.a.	n.a.	n.a.	n.a.	0.00	0.00
46.590	23.910	0.835	5665.8	3694.6	11.410	3.962	3.02		Clay	49.6			22.60	0.86	n.a.	n.a.	0.78	0.455	n.a.	n.a.	n.a.	n.a.	0.00	0.00
46.750	23.080	0.802	5685.0	3703.8	10.928	3.961	3.04		Clay	50.2			21.81	0.86	n.a.	n.a.	0.78	0.454	n.a.	n.a.	n.a.	n.a.	0.00	0.00
46.920	24.130	0.660	5705.4	3713.6	11.459	3.100	2.96		Clay	46.9			22.81	0.86	n.a.	n.a.	0.77	0.454	n.a.	n.a.	n.a.	n.a.	0.00	0.00
47.080	24.140	0.756	5724.6	3722.8	11.431	3.552	2.99		Clay	48.4			22.82	0.86	n.a.	n.a.	0.77	0.454	n.a.	n.a.	n.a.	n.a.	0.00	0.00
47.240	25.860	0.959	5743.8	3732.0	12.319	4.171	3.01		Clay	49.1			24.44	0.86	n.a.	n.a.	0.77	0.453	n.a.	n.a.	n.a.	n.a.	0.00	0.00
47.410	30.260	1.210	5764.2	3741.8	14.633	4.420	2.96		Clay	47.3			28.60	0.86	n.a.	n.a.	0.77	0.453	n.a.	n.a.	n.a.	n.a.	0.00	0.00
47.570	32.110	1.403	5783.4	3751.0	15.579	4.801	2.97		Clay	47.3			30.35	0.86	n.a.	n.a.	0.77	0.453	n.a.	n.a.	n.a.	n.a.	0.00	0.00
47.740	31.500	1.521	5803.8	3760.8	15.208	5.318	3.00		Clay	48.9			29.77	0.86	n.a.	n.a.	0.77	0.452	n.a.	n.a.	n.a.	n.a.	0.00	0.00
47.900	29.100	1.387	5823.0	3770.0	13.893	5.298	3.03		Clay	50.1			27.50	0.86	n.a.	n.a.	0.77	0.452	n.a.	n.a.	n.a.	n.a.	0.00	0.00
48.060	26.550	1.166	5842.2	3779.3	12.505	4.935	3.05		Clay	50.8			25.09	0.86	n.a.	n.a.	0.77	0.452	n.a.	n.a.	n.a.	n.a.	0.00	0.00
48.230	25.570	1.091	5862.6	3789.0	11.950	4.817	3.06		Clay	51.2			24.17	0.86	n.a.	n.a.	0.77	0.451	n.a.	n.a.	n.a.	n.a.	0.00	0.00
48.390	23.960	1.113	5881.8	3798.3	11.068	5.297	3.11		Clay	53.4			22.65	0.86	n.a.	n.a.	0.77	0.451	n.a.	n.a.	n.a.	n.a.	0.00	0.00
48.560	21.840	0.696	5902.2	3808.1	9.920	3.684	3.05		Clay	50.9			20.64	0.86	n.a.	n.a.	0.77	0.450	n.a.	n.a.	n.a.	n.a.	0.00	0.00
48.720	18.780	0.734	5921.4	3817.3	8.288	4.637	3.17		Clay	56.4			17.75	0.86	n.a.	n.a.	0.76	0.450	n.a.	n.a.	n.a.	n.a.	0.00	0.00
48.880	21.160	0.783	5940.6	3826.5	9.507	4.306	3.11		Clay	53.3			20.00	0.86	n.a.	n.a.	0.76	0.450	n.a.	n.a.	n.a.	n.a.	0.00	0.00
49.050	20.480	0.868	5961.0	3836.3	9.123	4.958	3.16		Clay	55.6			19.36	0.85	n.a.	n.a.	0.76	0.449	n.a.	n.a.	n.a.	n.a.	0.00	0.00
49.210	24.050	0.894	5980.2	3845.5	10.953	4.243	3.05		Clay	51.0			22.73	0.85	n.a.	n.a.	0.76	0.449	n.a.	n.a.	n.a.	n.a.	0.00	0.00
49.380	20.960	0.782	6000.6	3855.3	9.317	4.355	3.12		Clay	53.8			19.81	0.85	n.a.	n.a.	0.76	0.449	n.a.	n.a.	n.a.	n.a.	0.00	0.00
49.540	18.890	0.619	6019.8	3864.5	8.218	3.898	3.13		Clay	54.5			17.85	0.85	n.a.	n.a.	0.76	0.448	n.a.	n.a.	n.a.	n.a.	0.00	0.00
49.700	17.690	0.401	6039.0	3873.7	7.574	2.735	3.08		Clay	52.0			16.72	0.85	n.a.	n.a.	0.76	0.448	n.a.	n.a.	n.a.	n.a.	0.00	0.00
49.870	14.260	0.467	6059.4	3883.5	5.784	4.159	3.27		Clay	61.1			13.48	0.85	n.a.	n.a.	0.76	0.448	n.a.	n.a.	n.a.	n.a.	0.00	0.00
50.030	14.530	0.455	6078.6	3892.7	5.904	3.963	3.25		Clay	60.2			13.73	0.85	n.a.	n.a.	0.76	0.447	n.a.	n.a.	n.a.	n.a.	0.00	0.00
50.200	17.590	0.469	6099.0	3902.5	7.452	3.228	3.12		Clay	54.0			16.63	0.85	n.a.	n.a.	0.76	0.447	n.a.	n.a.	n.a.	n.a.	0.00	0.00
50.360	18.110	0.369	6118.2	3911.7	7.695	2.454	3.04		Clay	50.6			17.12	0.85	n.a.	n.a.	0.76	0.447	n.a.	n.a.	n.a.	n.a.	0.00	0.00
50.520	16.490	0.439	6137.4	3921.0	6.846	3.269	3.15		Clay	55.5			15.59	0.85	n.a.	n.a.	0.75	0.446	n.a.	n.a.	n.a.	n.a.	0.00	0.00
50.690	15.380	0.468	6157.8	3930.7	6.259	3.804	3.22		Clay	58.7			14.54	0.85	n.a.	n.a.	0.75	0.446	n.a.	n.a.	n.a.	n.a.	0.00	0.00
50.850	15.470	0.494	6177.0	3940.0	6.285	3.988	3.23		Clay	59.2			14.62	0.85	n.a.	n.a.	0.75	0.445	n.a.	n.a.	n.a.	n.a.	0.00	0.00
51.020	16.320	0.491	6197.4	3949.8	6.695	3.715	3.19		Clay	57.3			15.43	0.85	n.a.	n.a.	0.75	0.445	n.a.	n.a.	n.a.	n.a.	0.00	0.00
51.180	15.370	0.406	6216.6	3959.0	6.194	3.312	3.19		Clay	57.3			14.53	0.85	n.a.	n.a.	0.75	0.445	n.a.	n.a.	n.a.	n.a.	0.00	0.00
51.350	14.130	0.413	6237.0	3968.8	5.549	3.751	3.26		Clay	60.6														

Depth (ft)	$q_c$ (tsf)	$f_s$ (tsf)	$\sigma_{vc}$ (psf)	In situ $\sigma'_{vc}$ (psf)	Q	F (%)	$l_c$	Layer "Plastic" PI > 7	Flag Soil Type	Fines (%)	$q_{cN}$ near interfaces (soft layer)	Thin Layer Factor ( $K_{t1}$ )	Interpreted $q_{cN}$	$C_N$	$q_{c1N}$	$q_{c1N-CS}$	Stress Reduction Coeff. $r_d$	CSR	$K_{\sigma}$ for Sand	$CRR_{M=7.5}$ $r'_{vc} = 1 \text{ atm}$	CRR	Factor of Safety (CRR/CSR)	Vertical Strain $\epsilon_v$	Settlement (Inches)
52.660	15.970	0.400	6394.2	4044.2	6.317	3.131	3.17		Clay	56.4			15.09	0.84	n.a.	n.a.	0.74	0.441	n.a.	n.a.	n.a.	n.a.	0.00	0.00
52.820	15.640	0.333	6413.4	4053.4	6.135	2.677	3.15		Clay	55.2			14.78	0.84	n.a.	n.a.	0.74	0.441	n.a.	n.a.	n.a.	n.a.	0.00	0.00
52.990	15.890	0.371	6433.8	4063.2	6.238	2.929	3.16		Clay	55.9			15.02	0.84	n.a.	n.a.	0.74	0.441	n.a.	n.a.	n.a.	n.a.	0.00	0.00
53.150	19.200	0.686	6453.0	4072.4	7.845	4.297	3.17		Clay	56.4			18.15	0.84	n.a.	n.a.	0.74	0.440	n.a.	n.a.	n.a.	n.a.	0.00	0.00
53.310	27.460	0.667	6472.2	4081.7	11.870	2.751	2.91		Clay	45.2			25.95	0.84	n.a.	n.a.	0.74	0.440	n.a.	n.a.	n.a.	n.a.	0.00	0.00
53.480	32.830	0.412	6492.6	4091.4	14.461	1.393	2.68		Clay	36.4			31.03	0.84	n.a.	n.a.	0.74	0.440	n.a.	n.a.	n.a.	n.a.	0.00	0.00
53.640	20.170	0.343	6511.8	4100.7	8.249	2.026	2.98		Clay	47.7			19.06	0.84	n.a.	n.a.	0.74	0.439	n.a.	n.a.	n.a.	n.a.	0.00	0.00
53.810	14.990	0.277	6532.2	4110.5	5.704	2.364	3.15		Clay	55.2			14.17	0.84	n.a.	n.a.	0.74	0.439	n.a.	n.a.	n.a.	n.a.	0.00	0.00
53.970	14.870	0.237	6551.4	4119.7	5.629	2.042	3.12		Clay	54.0			14.05	0.84	n.a.	n.a.	0.74	0.438	n.a.	n.a.	n.a.	n.a.	0.00	0.00
54.130	13.620	0.222	6570.6	4128.9	5.006	2.146	3.18		Clay	56.5			12.87	0.84	n.a.	n.a.	0.73	0.438	n.a.	n.a.	n.a.	n.a.	0.00	0.00
54.300	13.340	0.234	6591.0	4138.7	4.854	2.334	3.20		Clay	57.9			12.61	0.84	n.a.	n.a.	0.73	0.438	n.a.	n.a.	n.a.	n.a.	0.00	0.00
54.460	14.670	0.390	6610.2	4147.9	5.480	3.428	3.25		Clay	59.8			13.87	0.84	n.a.	n.a.	0.73	0.437	n.a.	n.a.	n.a.	n.a.	0.00	0.00
54.630	19.080	0.725	6630.6	4157.7	7.583	4.600	3.20		Clay	57.7			18.03	0.84	n.a.	n.a.	0.73	0.437	n.a.	n.a.	n.a.	n.a.	0.00	0.00
54.790	37.240	1.314	6649.8	4166.9	16.278	3.874	2.89		Clay	44.3			35.20	0.84	n.a.	n.a.	0.73	0.437	n.a.	n.a.	n.a.	n.a.	0.00	0.00
54.950	69.300	1.516	6669.0	4176.1	44.382	2.298	2.41		Sand	27.7	69.28	1.8	124.70	0.76	95.32	154.98	0.73	0.436	0.886	0.296	0.307	0.70	0.02	0.00
55.120	73.300	1.542	6689.4	4185.9	47.011	2.204	2.38		Sand	26.8		1.8	124.71	0.76	95.15	154.13	0.73	0.436	0.887	0.292	0.303	0.70	0.02	0.00
55.280	56.430	1.483	6708.6	4195.1	25.303	2.793	2.65		Clay	35.5			53.34	0.83	n.a.	n.a.	0.73	0.435	n.a.	n.a.	n.a.	n.a.	0.00	0.00
55.450	51.940	1.378	6729.0	4204.9	23.104	2.837	2.69		Clay	36.7			49.09	0.83	n.a.	n.a.	0.73	0.435	n.a.	n.a.	n.a.	n.a.	0.00	0.00
55.610	47.900	1.515	6748.2	4214.1	21.132	3.402	2.77		Clay	39.6			45.27	0.83	n.a.	n.a.	0.73	0.435	n.a.	n.a.	n.a.	n.a.	0.00	0.00
55.770	32.370	1.149	6767.4	4223.4	13.727	3.964	2.96		Clay	46.9			30.60	0.83	n.a.	n.a.	0.73	0.434	n.a.	n.a.	n.a.	n.a.	0.00	0.00
55.940	22.560	0.836	6787.8	4233.1	9.055	4.362	3.13		Clay	54.2			21.32	0.83	n.a.	n.a.	0.72	0.434	n.a.	n.a.	n.a.	n.a.	0.00	0.00
56.100	20.950	0.732	6807.0	4242.4	8.272	4.169	3.15		Clay	55.1			19.80	0.83	n.a.	n.a.	0.72	0.433	n.a.	n.a.	n.a.	n.a.	0.00	0.00
56.270	22.360	1.146	6827.4	4252.2	8.911	6.047	3.22		Clay	58.5			21.13	0.83	n.a.	n.a.	0.72	0.433	n.a.	n.a.	n.a.	n.a.	0.00	0.00
56.430	34.710	1.889	6846.6	4261.4	14.684	6.039	3.05		Clay	50.9			32.81	0.83	n.a.	n.a.	0.72	0.433	n.a.	n.a.	n.a.	n.a.	0.00	0.00
56.590	63.770	1.654	6865.8	4270.6	28.257	2.741	2.61		Clay	34.0			60.27	0.83	n.a.	n.a.	0.72	0.432	n.a.	n.a.	n.a.	n.a.	0.00	0.00
56.760	68.750	1.627	6886.2	4280.4	43.400	2.491	2.44		Sand	28.6	1.8	1.8	116.97	0.75	87.54	145.16	0.72	0.432	0.892	0.251	0.262	0.61	0.02	0.00
56.920	44.830	1.391	6905.4	4289.6	19.292	3.361	2.80		Clay	40.6			42.37	0.83	n.a.	n.a.	0.72	0.432	n.a.	n.a.	n.a.	n.a.	0.00	0.00
57.090	26.620	1.321	6925.8	4299.4	10.772	5.706	3.14		Clay	54.8			25.16	0.83	n.a.	n.a.	0.72	0.431	n.a.	n.a.	n.a.	n.a.	0.00	0.00
57.250	24.150	1.287	6945.0	4308.6	9.598	6.226	3.20		Clay	57.7			22.83	0.83	n.a.	n.a.	0.72	0.431	n.a.	n.a.	n.a.	n.a.	0.00	0.00
57.410	41.560	1.219	6964.2	4317.8	17.638	3.200	2.81		Clay	41.3			39.28	0.83	n.a.	n.a.	0.72	0.430	n.a.	n.a.	n.a.	n.a.	0.00	0.00
57.580	58.340	1.408	6984.6	4327.6	25.348	2.567	2.63		Clay	34.6			55.14	0.83	n.a.	n.a.	0.72	0.430	n.a.	n.a.	n.a.	n.a.	0.00	0.00
57.740	36.730	1.212	7003.8	4336.8	15.324	3.648	2.90		Clay	44.5			34.72	0.83	n.a.	n.a.	0.71	0.430	n.a.	n.a.	n.a.	n.a.	0.00	0.00
57.910	23.050	1.031	7024.2	4346.6	8.990	5.277	3.18		Clay	56.6			21.79	0.83	n.a.	n.a.	0.71	0.429	n.a.	n.a.	n.a.	n.a.	0.00	0.00
58.070	18.870	0.707	7043.4	4355.8	7.047	4.604	3.23		Clay	58.9			17.84	0.83	n.a.	n.a.	0.71	0.429	n.a.	n.a.	n.a.	n.a.	0.00	0.00
58.230	18.620	0.624	7062.6	4365.0	6.913	4.134	3.21		Clay	58.0			17.60	0.83	n.a.	n.a.	0.71	0.429	n.a.	n.a.	n.a.	n.a.	0.00	0.00
58.400	15.100	0.489	7083.0	4374.8	5.284	4.230	3.31		Clay	62.9			14.27	0.83	n.a.	n.a.	0.71	0.428	n.a.	n.a.	n.a.	n.a.	0.00	0.00
58.560	14.210	0.478	7102.2	4384.1	4.863	4.484	3.35		Clay	65.1			13.43	0.83	n.a.	n.a.	0.71	0.428	n.a.	n.a.	n.a.	n.a.	0.00	0.00
58.730	14.360	0.508	7122.6	4393.8	4.915	4.703	3.36		Clay	65.5			13.57	0.82	n.a.	n.a.	0.71	0.427	n.a.	n.a.	n.a.	n.a.	0.00	0.00
58.890	14.580	0.509	7141.8	4403.1	5.001	4.627	3.35		Clay	65.0			13.78	0.82	n.a.	n.a.	0.71	0.427	n.a.	n.a.	n.a.	n.a.	0.00	0.00
59.060	14.700	0.488	7162.2	4412.9	5.039	4.391	3.34		Clay	64.2			13.89	0.82	n.a.	n.a.	0.71	0.427	n.a.	n.a.	n.a.	n.a.	0.00	0.00
59.220	15.480	0.511	7181.4	4422.1	5.377	4.297	3.31		Clay	62.8			14.63	0.82	n.a.	n.a.	0.71	0.426	n.a.	n.a.	n.a.	n.a.	0.00	0.00
59.380	15.560	0.470	7200.6	4431.3	5.398	3.932	3.28		Clay	61.7			14.71	0.82	n.a.	n.a.	0.71	0.426	n.a.	n.a.	n.a.	n.a.	0.00	0.00
59.550	15.860	0.457	7221.0	4441.1	5.516	3.730	3.26		Clay	60.7			14.99	0.82	n.a.	n.a.	0.71	0.425	n.a.	n.a.	n.a.	n.a.	0.00	0.00
59.710	16.620	0.478	7240.2	4450.3	5.842	3.680	3.24		Clay	59.5			15.71	0.82	n.a.	n.a.	0.70	0.425	n.a.	n.a.	n.a.	n.a.	0.00	0.00
59.880	16.810	0.547	7260.6	4460.1	5.910	4.150	3.26		Clay	60.7			15.89	0.82	n.a.	n.a.	0.70	0.425	n.a.	n.a.	n.a.	n.a.	0.00	0.00
60.040	16.470	0.578	7279.8	4469.3	5.741	4.504	3.30		Clay	62.2			15.57	0.82	n.a.	n.a.	0.70	0.424	n.a.	n.a.	n.a.	n.a.	0.00	0.00
60.200	18.520	0.526	7299.0	4478.5	6.641	3.536	3.18		Clay	56.9			17.50	0.82	n.a.	n.a.	0.70	0.424	n.a.	n.a.	n.a.	n.a.	0.00	0.00
60.370	17.460	0.403	7319.4	4488.3	6.149	2.917	3.17		Clay	56.1			16.50	0.82	n.a.	n.a.	0.70	0.423	n.a.	n.a.	n.a.	n.a.	0.00	0.00
60.530	16.300	0.406	7338.6	4497.5	5.617	3.214	3.22		Clay	58.7			15.41	0.82	n.a.	n.a.	0.70	0.423	n.a.	n.a.	n.a.	n.a.	0.00	0.00
60.700	16.250	0.413	7359.0	4507.3	5.578	3.285	3.23		Clay	59.0			15.36	0.82	n.a.	n.a.	0.70	0.423	n.a.	n.a.	n.a.	n.a.	0.00	0.00
60.860	16.000	0.390	7378.2	4516.5	5.451	3.165	3.23		Clay	59.0			15.12	0.82	n.a.	n.a.	0.70	0.422	n.a.	n.a.	n.a.	n.a.	0.00	0.00
61.020	16.380	0.397	7397.4	4525.8	5.604	3.127	3.22		Clay	58.4			15.48	0.82	n.a.	n.a.	0.70	0.422	n.a.	n.a.	n.a.	n.a.	0.00	0.00
61.190	16.490	0.366	7417.8	4535.5	5.636	2.863	3.19		Clay	57.4			15.59	0.82	n.a.	n.a.	0.70	0.422	n.a.	n.a.	n.a.	n.a.	0.00	0.00
61.350	16.920	0.362	7437.0	4544.8	5.810	2.744	3.17		Clay	56.4			15.99	0.82	n.a.	n.a.	0.70	0.421	n.a.	n.a.	n.a.	n.a.	0.00	0.00
61.520	17.490	0.382	7457.4	4554.6	6.043	2.777	3.16		Clay	55.8			16.53	0.82	n.a.	n.a.	0.70	0.421	n.a.	n.a.	n.a.	n.a.	0.00	0.00
61.680	19.770	0.422	7476.6	4563.8	7.026	2.632	3.09		Clay	52.8			18.69	0.82	n.a.	n.a.	0.69	0.420	n.a.	n.a.	n.a.	n.a.	0.00	0.00
6																								

Depth (ft)	q <sub>c</sub> (tsf)	f <sub>s</sub> (tsf)	σ <sub>vc</sub> (psf)	Insitu σ'vc (psf)	Q	F (%)	lc	Layer "Plastic" PI > 7	Flag Soil Type	Fines (%)	q <sub>c</sub> -N near interfaces (soft layer)	Thin Layer Factor (K <sub>tl</sub> )	Interpreted q <sub>c</sub> -N	C <sub>N</sub>	q <sub>c</sub> -1N	q <sub>c</sub> -1N-CS	Stress Reduction Coeff. r <sub>d</sub>	CSR	K <sub>σ</sub> for Sand	CRR <sub>M=7.5</sub> σ'vc = 1 atm	CRR	Factor of Safety (CRR/CSR)	Vertical Strain ε <sub>v</sub>	Settlement (Inches)
63.160	21.830	0.580	7654.2	4649.0	7.745	3.221	3.11		Clay	53.3			20.63	0.81	n.a.	n.a.	0.69	0.417	n.a.	n.a.	n.a.	n.a.	0.00	0.00
63.320	21.630	0.639	7673.4	4658.2	7.640	3.591	3.14		Clay	54.7			20.44	0.81	n.a.	n.a.	0.69	0.417	n.a.	n.a.	n.a.	n.a.	0.00	0.00
63.480	22.220	0.649	7692.6	4667.4	7.873	3.534	3.12		Clay	54.1			21.00	0.81	n.a.	n.a.	0.69	0.416	n.a.	n.a.	n.a.	n.a.	0.00	0.00
63.650	22.240	0.586	7713.0	4677.2	7.861	3.186	3.10		Clay	53.0			21.02	0.81	n.a.	n.a.	0.68	0.416	n.a.	n.a.	n.a.	n.a.	0.00	0.00
63.810	20.370	0.569	7732.2	4686.5	7.043	3.448	3.16		Clay	55.6			19.25	0.81	n.a.	n.a.	0.68	0.415	n.a.	n.a.	n.a.	n.a.	0.00	0.00
63.980	19.280	0.462	7752.6	4696.2	6.560	2.997	3.15		Clay	55.3			18.22	0.81	n.a.	n.a.	0.68	0.415	n.a.	n.a.	n.a.	n.a.	0.00	0.00
64.140	17.420	0.335	7771.8	4705.5	5.753	2.476	3.15		Clay	55.5			16.47	0.81	n.a.	n.a.	0.68	0.415	n.a.	n.a.	n.a.	n.a.	0.00	0.00
64.300	14.740	0.344	7791.0	4714.7	4.600	3.168	3.29		Clay	62.1			13.93	0.81	n.a.	n.a.	0.68	0.414	n.a.	n.a.	n.a.	n.a.	0.00	0.00
64.470	17.010	0.304	7811.4	4724.5	5.547	2.322	3.15		Clay	55.5			16.08	0.81	n.a.	n.a.	0.68	0.414	n.a.	n.a.	n.a.	n.a.	0.00	0.00
64.630	16.090	0.275	7830.6	4733.7	5.144	2.256	3.18		Clay	56.5			15.21	0.81	n.a.	n.a.	0.68	0.414	n.a.	n.a.	n.a.	n.a.	0.00	0.00
64.800	17.410	0.391	7851.0	4743.5	5.685	2.897	3.19		Clay	57.3			16.46	0.81	n.a.	n.a.	0.68	0.413	n.a.	n.a.	n.a.	n.a.	0.00	0.00
64.960	19.600	0.652	7870.2	4752.7	6.592	4.159	3.23		Clay	58.9			18.53	0.81	n.a.	n.a.	0.68	0.413	n.a.	n.a.	n.a.	n.a.	0.00	0.00
65.120	25.960	0.839	7889.4	4761.9	9.246	3.811	3.08		Clay	52.4			24.54	0.81	n.a.	n.a.	0.68	0.412	n.a.	n.a.	n.a.	n.a.	0.00	0.00
65.290	29.770	0.939	7909.8	4771.7	10.820	3.638	3.02		Clay	49.5			28.14	0.81	n.a.	n.a.	0.68	0.412	n.a.	n.a.	n.a.	n.a.	0.00	0.00
65.450	33.200	0.929	7929.0	4780.9	12.230	3.177	2.94		Clay	46.2			31.38	0.81	n.a.	n.a.	0.68	0.412	n.a.	n.a.	n.a.	n.a.	0.00	0.00
65.620	32.030	0.988	7949.4	4790.7	11.712	3.521	2.98		Clay	47.9			30.27	0.81	n.a.	n.a.	0.68	0.411	n.a.	n.a.	n.a.	n.a.	0.00	0.00
65.780	33.280	1.054	7968.6	4799.9	12.207	3.596	2.97		Clay	47.6			31.46	0.81	n.a.	n.a.	0.67	0.411	n.a.	n.a.	n.a.	n.a.	0.00	0.00
65.940	33.520	0.990	7987.8	4809.1	12.279	3.352	2.95		Clay	46.7			31.68	0.81	n.a.	n.a.	0.67	0.411	n.a.	n.a.	n.a.	n.a.	0.00	0.00
66.110	35.030	0.712	8008.2	4818.9	12.877	2.295	2.84		Clay	42.3			33.11	0.80	n.a.	n.a.	0.67	0.410	n.a.	n.a.	n.a.	n.a.	0.00	0.00
66.270	29.520	0.735	8027.4	4828.2	10.566	2.882	2.97		Clay	47.3			27.90	0.80	n.a.	n.a.	0.67	0.410	n.a.	n.a.	n.a.	n.a.	0.00	0.00
66.440	24.600	0.789	8047.8	4837.9	8.506	3.835	3.12		Clay	53.7			23.25	0.80	n.a.	n.a.	0.67	0.409	n.a.	n.a.	n.a.	n.a.	0.00	0.00
66.600	24.550	0.807	8067.0	4847.2	8.465	3.933	3.12		Clay	54.1			23.20	0.80	n.a.	n.a.	0.67	0.409	n.a.	n.a.	n.a.	n.a.	0.00	0.00
66.770	26.690	0.809	8087.4	4857.0	9.325	3.571	3.07		Clay	51.5			25.23	0.80	n.a.	n.a.	0.67	0.409	n.a.	n.a.	n.a.	n.a.	0.00	0.00
66.930	26.650	0.832	8106.6	4866.2	9.287	3.680	3.07		Clay	51.9			25.19	0.80	n.a.	n.a.	0.67	0.408	n.a.	n.a.	n.a.	n.a.	0.00	0.00
67.090	26.050	0.756	8125.8	4875.4	9.020	3.436	3.07		Clay	51.6			24.62	0.80	n.a.	n.a.	0.67	0.408	n.a.	n.a.	n.a.	n.a.	0.00	0.00
67.260	23.040	0.654	8146.2	4885.2	7.765	3.448	3.12		Clay	54.0			21.78	0.80	n.a.	n.a.	0.67	0.408	n.a.	n.a.	n.a.	n.a.	0.00	0.00
67.420	20.020	0.483	8165.4	4894.4	6.512	3.033	3.15		Clay	55.5			18.92	0.80	n.a.	n.a.	0.67	0.407	n.a.	n.a.	n.a.	n.a.	0.00	0.00
67.590	19.340	0.692	8185.8	4904.2	6.218	4.535	3.27		Clay	60.9			18.28	0.80	n.a.	n.a.	0.67	0.407	n.a.	n.a.	n.a.	n.a.	0.00	0.00
67.750	21.750	0.669	8205.0	4913.4	7.183	3.788	3.17		Clay	56.3			20.56	0.80	n.a.	n.a.	0.66	0.406	n.a.	n.a.	n.a.	n.a.	0.00	0.00
67.910	22.260	0.616	8224.2	4922.6	7.373	3.393	3.14		Clay	54.7			21.04	0.80	n.a.	n.a.	0.66	0.406	n.a.	n.a.	n.a.	n.a.	0.00	0.00
68.080	21.190	0.683	8244.6	4932.4	6.921	4.002	3.20		Clay	57.6			20.03	0.80	n.a.	n.a.	0.66	0.406	n.a.	n.a.	n.a.	n.a.	0.00	0.00
68.240	21.070	0.602	8263.8	4941.6	6.855	3.552	3.17		Clay	56.4			19.91	0.80	n.a.	n.a.	0.66	0.405	n.a.	n.a.	n.a.	n.a.	0.00	0.00
68.410	19.990	0.520	8284.2	4951.4	6.401	3.284	3.18		Clay	56.7			18.89	0.80	n.a.	n.a.	0.66	0.405	n.a.	n.a.	n.a.	n.a.	0.00	0.00
68.570	19.400	0.483	8303.4	4960.6	6.148	3.168	3.19		Clay	57.0			18.34	0.80	n.a.	n.a.	0.66	0.405	n.a.	n.a.	n.a.	n.a.	0.00	0.00
68.730	21.700	0.671	8322.6	4969.8	7.058	3.826	3.18		Clay	56.8			20.51	0.80	n.a.	n.a.	0.66	0.404	n.a.	n.a.	n.a.	n.a.	0.00	0.00
68.900	26.210	0.886	8343.0	4979.6	8.851	4.019	3.11		Clay	53.6			24.77	0.80	n.a.	n.a.	0.66	0.404	n.a.	n.a.	n.a.	n.a.	0.00	0.00
69.060	27.700	0.791	8362.2	4988.9	9.429	3.363	3.05		Clay	50.7			26.18	0.80	n.a.	n.a.	0.66	0.403	n.a.	n.a.	n.a.	n.a.	0.00	0.00
69.230	27.290	0.667	8382.6	4998.6	9.242	2.885	3.02		Clay	49.4			25.79	0.80	n.a.	n.a.	0.66	0.403	n.a.	n.a.	n.a.	n.a.	0.00	0.00
69.390	24.230	0.505	8401.8	5007.9	7.999	2.519	3.04		Clay	50.3			22.90	0.80	n.a.	n.a.	0.66	0.403	n.a.	n.a.	n.a.	n.a.	0.00	0.00
69.550	21.340	0.414	8421.0	5017.1	6.828	2.416	3.08		Clay	52.4			20.17	0.80	n.a.	n.a.	0.66	0.402	n.a.	n.a.	n.a.	n.a.	0.00	0.00
69.720	20.190	0.317	8441.4	5026.9	6.354	1.983	3.07		Clay	51.7			19.08	0.80	n.a.	n.a.	0.66	0.402	n.a.	n.a.	n.a.	n.a.	0.00	0.00
69.880	21.290	1.061	8460.6	5036.1	6.775	6.218	3.32		Clay	63.4			20.12	0.80	n.a.	n.a.	0.66	0.402	n.a.	n.a.	n.a.	n.a.	0.00	0.00
70.050	28.300	1.135	8481.0	5045.9	9.536	4.718	3.13		Clay	54.3			26.75	0.80	n.a.	n.a.	0.65	0.401	n.a.	n.a.	n.a.	n.a.	0.00	0.00
70.210	32.850	0.893	8500.2	5055.1	11.315	3.121	2.96		Clay	47.2			31.05	0.79	n.a.	n.a.	0.65	0.401	n.a.	n.a.	n.a.	n.a.	0.00	0.00
70.370	32.560	0.766	8519.4	5064.3	11.176	2.707	2.93		Clay	45.9			30.78	0.79	n.a.	n.a.	0.65	0.401	n.a.	n.a.	n.a.	n.a.	0.00	0.00
70.540	26.240	0.707	8539.8	5074.1	8.660	3.216	3.07		Clay	51.5			24.80	0.79	n.a.	n.a.	0.65	0.400	n.a.	n.a.	n.a.	n.a.	0.00	0.00
70.700	24.200	0.669	8559.0	5083.3	7.838	3.360	3.11		Clay	53.6			22.87	0.79	n.a.	n.a.	0.65	0.400	n.a.	n.a.	n.a.	n.a.	0.00	0.00
70.870	22.270	0.570	8579.4	5093.1	7.061	3.168	3.14		Clay	54.6			21.05	0.79	n.a.	n.a.	0.65	0.399	n.a.	n.a.	n.a.	n.a.	0.00	0.00
71.030	20.910	0.466	8598.6	5102.3	6.511	2.807	3.14		Clay	54.7			19.76	0.79	n.a.	n.a.	0.65	0.399	n.a.	n.a.	n.a.	n.a.	0.00	0.00
71.190	21.290	0.516	8617.8	5111.5	6.644	3.036	3.15		Clay	55.2			20.12	0.79	n.a.	n.a.	0.65	0.399	n.a.	n.a.	n.a.	n.a.	0.00	0.00
71.360	18.090	0.580	8638.2	5121.3	5.378	4.210	3.30		Clay	62.5			17.10	0.79	n.a.	n.a.	0.65	0.398	n.a.	n.a.	n.a.	n.a.	0.00	0.00
71.520	21.860	0.603	8657.4	5130.6	6.834	3.439	3.17		Clay	56.1			20.66	0.79	n.a.	n.a.	0.65	0.398	n.a.	n.a.	n.a.	n.a.	0.00	0.00
71.690	22.050	0.539	8677.8	5140.3	6.891	3.042	3.13		Clay	54.6			20.84	0.79	n.a.	n.a.	0.65	0.398	n.a.	n.a.	n.a.	n.a.	0.00	0.00
71.850	22.320	0.461	8697.0	5149.6	6.980	2.567	3.09		Clay	52.6			21.10	0.79	n.a.	n.a.	0.65	0.397	n.a.	n.a.	n.a.	n.a.	0.00	0.00
72.010	21.350	0.410	8716.2	5158.8	6.588	2.411	3.10		Clay	53.0			20.18	0.79	n.a.	n.a.	0.65	0.397	n.a.	n.a.	n.a.	n.a.	0.00	0.00
72.180	20.770	0.373	8736.6	5168.6	6.347	2.272	3.10		Clay	53.0			19.63	0.79	n.a.	n.a.	0.65	0.397	n.a.	n.a.	n.a.	n.a.	0.00	0.00
72.340	21.490	0.388	8755.8	5177.8	6.610	2.265	3.08		Clay	52.3			20.31	0.79										

Depth (ft)	q <sub>c</sub> (tsf)	f <sub>s</sub> (tsf)	σ <sub>vc</sub> (psf)	In situ σ'vc (psf)	Q	F (%)	lc	Layer "Plastic" PI > 7	Flag Soil Type	Fines (%)	q <sub>c-N</sub> near interfaces (soft layer)	Thin Layer Factor (K <sub>tl</sub> )	Interpreted q <sub>c-N</sub>	C <sub>N</sub>	q <sub>c1N</sub>	q <sub>c1N-CS</sub>	Stress Reduction Coeff. r <sub>d</sub>	CSR	K <sub>σ</sub> for Sand	CRRM=7.5, σ'vc = 1 atm	CRR	Factor of Safety (CRR/CSR)	Vertical Strain ε <sub>v</sub>	Settlement (Inches)
73.650	20.010	0.506	8913.0	5253.2	5.921	3.255	3.21		Clay	57.9			18.91	0.79	n.a.	n.a.	0.64	0.393	n.a.	n.a.	n.a.	n.a.	0.00	0.00
73.820	18.870	0.466	8933.4	5263.0	5.473	3.235	3.23		Clay	59.2			17.84	0.79	n.a.	n.a.	0.64	0.393	n.a.	n.a.	n.a.	n.a.	0.00	0.00
73.980	18.520	0.412	8952.6	5272.2	5.327	2.932	3.22		Clay	58.6			17.50	0.79	n.a.	n.a.	0.64	0.393	n.a.	n.a.	n.a.	n.a.	0.00	0.00
74.150	20.400	0.485	8973.0	5282.0	6.026	3.048	3.18		Clay	56.9			19.28	0.79	n.a.	n.a.	0.64	0.392	n.a.	n.a.	n.a.	n.a.	0.00	0.00
74.310	21.880	0.415	8992.2	5291.3	6.571	2.390	3.10		Clay	52.9			20.68	0.79	n.a.	n.a.	0.64	0.392	n.a.	n.a.	n.a.	n.a.	0.00	0.00
74.480	19.380	0.383	9012.6	5301.0	5.612	2.575	3.17		Clay	56.3			18.32	0.78	n.a.	n.a.	0.64	0.392	n.a.	n.a.	n.a.	n.a.	0.00	0.00
74.640	19.910	0.377	9031.8	5310.3	5.798	2.447	3.15		Clay	55.2			18.82	0.78	n.a.	n.a.	0.63	0.391	n.a.	n.a.	n.a.	n.a.	0.00	0.00
74.800	20.060	0.377	9051.0	5319.5	5.841	2.429	3.14		Clay	55.0			18.96	0.78	n.a.	n.a.	0.63	0.391	n.a.	n.a.	n.a.	n.a.	0.00	0.00
74.970	20.010	0.420	9071.4	5329.3	5.807	2.714	3.17		Clay	56.3			18.91	0.78	n.a.	n.a.	0.63	0.391	n.a.	n.a.	n.a.	n.a.	0.00	0.00
75.130	23.730	0.551	9090.6	5338.5	7.187	2.874	3.11		Clay	53.3			22.43	0.78	n.a.	n.a.	0.63	0.390	n.a.	n.a.	n.a.	n.a.	0.00	0.00
75.300	24.580	0.637	9111.0	5348.3	7.488	3.182	3.12		Clay	53.7			23.23	0.78	n.a.	n.a.	0.63	0.390	n.a.	n.a.	n.a.	n.a.	0.00	0.00
75.460	25.550	0.629	9130.2	5357.5	7.834	2.996	3.08		Clay	52.4			24.15	0.78	n.a.	n.a.	0.63	0.390	n.a.	n.a.	n.a.	n.a.	0.00	0.00
75.620	24.790	0.643	9149.4	5366.7	7.534	3.180	3.11		Clay	53.6			23.43	0.78	n.a.	n.a.	0.63	0.389	n.a.	n.a.	n.a.	n.a.	0.00	0.00
75.790	24.890	0.570	9168.8	5376.5	7.553	2.807	3.08		Clay	52.3			23.53	0.78	n.a.	n.a.	0.63	0.389	n.a.	n.a.	n.a.	n.a.	0.00	0.00
75.950	25.020	0.535	9189.0	5385.7	7.585	2.620	3.06		Clay	51.5			23.65	0.78	n.a.	n.a.	0.63	0.389	n.a.	n.a.	n.a.	n.a.	0.00	0.00
76.120	21.730	0.568	9209.4	5395.5	6.348	3.316	3.19		Clay	56.9			20.54	0.78	n.a.	n.a.	0.63	0.388	n.a.	n.a.	n.a.	n.a.	0.00	0.00
76.280	22.020	0.560	9228.6	5404.7	6.441	3.218	3.17		Clay	56.3			20.81	0.78	n.a.	n.a.	0.63	0.388	n.a.	n.a.	n.a.	n.a.	0.00	0.00
76.440	21.390	0.515	9247.8	5413.9	6.194	3.070	3.18		Clay	56.5			20.22	0.78	n.a.	n.a.	0.63	0.388	n.a.	n.a.	n.a.	n.a.	0.00	0.00
76.610	19.830	0.497	9268.2	5423.7	5.603	3.271	3.23		Clay	58.9			18.74	0.78	n.a.	n.a.	0.63	0.387	n.a.	n.a.	n.a.	n.a.	0.00	0.00
76.770	18.980	0.475	9287.4	5433.0	5.278	3.313	3.25		Clay	60.1			17.94	0.78	n.a.	n.a.	0.63	0.387	n.a.	n.a.	n.a.	n.a.	0.00	0.00
76.940	19.280	0.486	9307.8	5442.7	5.375	3.324	3.25		Clay	59.8			18.22	0.78	n.a.	n.a.	0.63	0.387	n.a.	n.a.	n.a.	n.a.	0.00	0.00
77.100	20.200	0.430	9327.0	5452.0	5.699	2.766	3.18		Clay	56.8			19.09	0.78	n.a.	n.a.	0.62	0.386	n.a.	n.a.	n.a.	n.a.	0.00	0.00
77.260	19.180	0.379	9346.2	5461.2	5.313	2.611	3.20		Clay	57.4			18.13	0.78	n.a.	n.a.	0.62	0.386	n.a.	n.a.	n.a.	n.a.	0.00	0.00
77.430	18.420	0.356	9366.6	5471.0	5.022	2.589	3.21		Clay	58.3			17.41	0.78	n.a.	n.a.	0.62	0.386	n.a.	n.a.	n.a.	n.a.	0.00	0.00
77.590	18.620	0.383	9385.8	5480.2	5.083	2.752	3.22		Clay	58.7			17.60	0.78	n.a.	n.a.	0.62	0.385	n.a.	n.a.	n.a.	n.a.	0.00	0.00
77.760	19.680	0.483	9406.2	5490.0	5.456	3.226	3.23		Clay	59.2			18.60	0.78	n.a.	n.a.	0.62	0.385	n.a.	n.a.	n.a.	n.a.	0.00	0.00
77.920	21.110	0.516	9425.4	5499.2	5.964	3.147	3.20		Clay	57.4			19.95	0.78	n.a.	n.a.	0.62	0.385	n.a.	n.a.	n.a.	n.a.	0.00	0.00
78.080	21.370	0.520	9444.6	5508.4	6.044	3.125	3.19		Clay	57.1			20.20	0.78	n.a.	n.a.	0.62	0.384	n.a.	n.a.	n.a.	n.a.	0.00	0.00
78.250	22.190	0.514	9465.0	5518.2	6.327	2.945	3.16		Clay	55.7			20.97	0.78	n.a.	n.a.	0.62	0.384	n.a.	n.a.	n.a.	n.a.	0.00	0.00
78.410	23.670	0.541	9484.2	5527.4	6.849	2.859	3.12		Clay	54.1			22.37	0.78	n.a.	n.a.	0.62	0.384	n.a.	n.a.	n.a.	n.a.	0.00	0.00
78.580	24.740	0.630	9504.6	5537.2	7.219	3.153	3.13		Clay	54.2			23.38	0.78	n.a.	n.a.	0.62	0.383	n.a.	n.a.	n.a.	n.a.	0.00	0.00
78.740	24.760	0.417	9523.8	5546.4	7.211	2.084	3.03		Clay	50.1			23.40	0.78	n.a.	n.a.	0.62	0.383	n.a.	n.a.	n.a.	n.a.	0.00	0.00
78.900	20.940	0.499	9543.0	5555.6	5.821	3.085	3.20		Clay	57.6			19.79	0.78	n.a.	n.a.	0.62	0.383	n.a.	n.a.	n.a.	n.a.	0.00	0.00
79.070	21.170	0.522	9563.4	5565.4	5.889	3.187	3.20		Clay	57.8			20.01	0.77	n.a.	n.a.	0.62	0.382	n.a.	n.a.	n.a.	n.a.	0.00	0.00
79.230	20.370	0.430	9582.6	5574.6	5.589	2.758	3.19		Clay	57.1			19.25	0.77	n.a.	n.a.	0.62	0.382	n.a.	n.a.	n.a.	n.a.	0.00	0.00
79.400	18.990	0.383	9603.0	5584.4	5.081	2.698	3.22		Clay	58.5			17.95	0.77	n.a.	n.a.	0.62	0.382	n.a.	n.a.	n.a.	n.a.	0.00	0.00
79.560	18.840	0.349	9622.2	5593.7	5.016	2.487	3.21		Clay	57.9			17.81	0.77	n.a.	n.a.	0.62	0.382	n.a.	n.a.	n.a.	n.a.	0.00	0.00
79.720	18.180	0.343	9641.4	5602.9	4.769	2.565	3.23		Clay	59.1			17.18	0.77	n.a.	n.a.	0.61	0.381	n.a.	n.a.	n.a.	n.a.	0.00	0.00
79.890	19.570	0.341	9661.8	5612.7	5.252	2.314	3.17		Clay	56.4			18.50	0.77	n.a.	n.a.	0.61	0.381	n.a.	n.a.	n.a.	n.a.	0.00	0.00
80.050	20.350	0.373	9681.0	5621.9	5.518	2.405	3.16		Clay	55.9			19.23	0.77	n.a.	n.a.	0.61	0.381	n.a.	n.a.	n.a.	n.a.	0.00	0.00
80.220	21.420	0.409	9701.4	5631.7	5.884	2.467	3.14		Clay	55.1			20.25	0.77	n.a.	n.a.	0.61	0.380	n.a.	n.a.	n.a.	n.a.	0.00	0.00
80.380	22.030	0.408	9720.6	5640.9	6.088	2.375	3.12		Clay	54.1			20.82	0.77	n.a.	n.a.	0.61	0.380	n.a.	n.a.	n.a.	n.a.	0.00	0.00
80.540	23.870	0.458	9739.8	5650.1	6.726	2.411	3.09		Clay	52.6			22.56	0.77	n.a.	n.a.	0.61	0.380	n.a.	n.a.	n.a.	n.a.	0.00	0.00
80.710	22.880	0.379	9760.2	5659.9	6.361	2.107	3.08		Clay	52.2			21.63	0.77	n.a.	n.a.	0.61	0.379	n.a.	n.a.	n.a.	n.a.	0.00	0.00
80.870	22.090	0.396	9779.4	5669.1	6.068	2.304	3.12		Clay	53.9			20.88	0.77	n.a.	n.a.	0.61	0.379	n.a.	n.a.	n.a.	n.a.	0.00	0.00
81.040	20.530	0.380	9799.8	5678.9	5.505	2.429	3.17		Clay	56.1			19.40	0.77	n.a.	n.a.	0.61	0.379	n.a.	n.a.	n.a.	n.a.	0.00	0.00
81.200	19.930	0.395	9819.0	5688.1	5.281	2.626	3.20		Clay	57.6			18.84	0.77	n.a.	n.a.	0.61	0.378	n.a.	n.a.	n.a.	n.a.	0.00	0.00
81.360	20.060	0.466	9838.2	5697.3	5.315	3.078	3.23		Clay	59.2			18.96	0.77	n.a.	n.a.	0.61	0.378	n.a.	n.a.	n.a.	n.a.	0.00	0.00
81.530	20.480	0.521	9858.6	5707.1	5.450	3.350	3.24		Clay	59.7			19.36	0.77	n.a.	n.a.	0.61	0.378	n.a.	n.a.	n.a.	n.a.	0.00	0.00
81.690	21.330	0.482	9877.8	5716.3	5.735	2.942	3.19		Clay	57.4			20.16	0.77	n.a.	n.a.	0.61	0.378	n.a.	n.a.	n.a.	n.a.	0.00	0.00
81.860	22.250	0.503	9898.2	5726.1	6.043	2.908	3.17		Clay	56.3			21.03	0.77	n.a.	n.a.	0.61	0.377	n.a.	n.a.	n.a.	n.a.	0.00	0.00
82.020	23.890	0.631	9917.4	5735.4	6.602	3.334	3.17		Clay	56.3			22.58	0.77	n.a.	n.a.	0.61	0.377	n.a.	n.a.	n.a.	n.a.	0.00	0.00
82.190	24.680	0.710	9937.8	5745.1	6.862	3.602	3.18		Clay	56.5			23.33	0.77	n.a.	n.a.	0.61	0.377	n.a.	n.a.	n.a.	n.a.	0.00	0.00
82.350	24.390	0.710	9957.0	5754.4	6.747	3.657	3.19		Clay	57.0			23.05	0.77	n.a.	n.a.	0.61	0.376	n.a.	n.a.	n.a.	n.a.	0.00	0.00
82.510	24.920	0.701	9976.2	5763.6	6.917	3.515	3.17		Clay	56.1			23.55	0.77	n.a.	n.a.	0.60	0.376	n.a.	n.a.	n.a.	n.a.	0.00	0.00
82.680	24.680	0.679	9996.6	5773.4	6.818	3.449	3.17		Clay	56.2			23.33	0.77	n.a.	n.a.	0.60	0.376	n.a.	n.a.	n.a.	n.a.	0.00	0.00
82.840	25.460	0.685	10015.8	5782.6	7.074	3.350	3.15		Clay	55.2			24.06	0.77	n.a.	n.a.	0							